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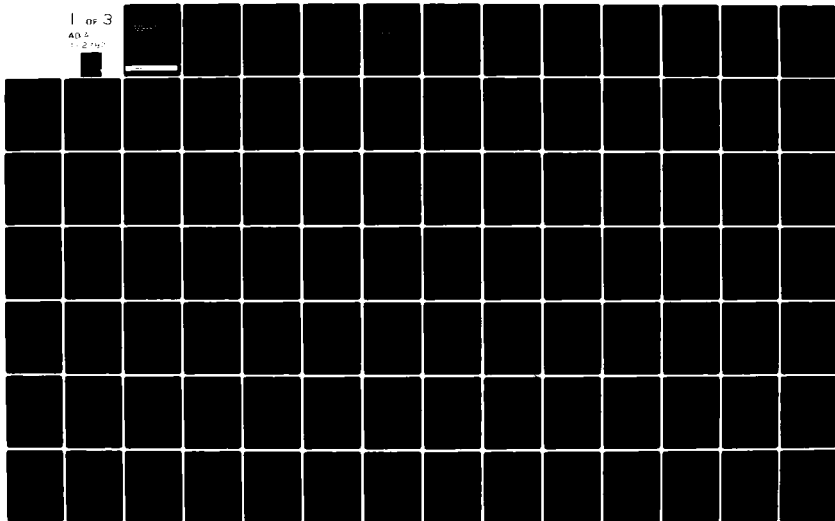
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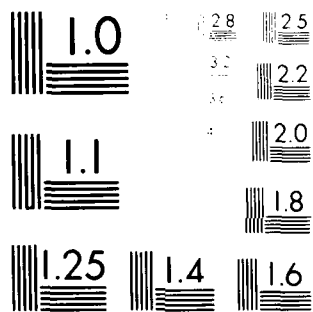
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# Effectiveness and Cost of Alcohol Rehabilitation in the United States Air Force

Bruce R. Orvis, David J. Armor, Christine E. Williams,  
Andrea J. Barras, Donna S. Schwarzbach

December 1981

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Evaluates the scope and outcome of rehabilitation efforts, the success of the Alcohol Rehabilitation Program in identifying impaired persons for treatment, and the cost-effectiveness of different interventions. Conclusions are that clients show substantial improvement after treatment and that the less intensive treatments are as effective as more intensive interventions for persons with comparable impairment at admission. However, less than 10 percent of the problem population appears to be identified for treatment annually and the use of intensive interventions may be overemphasized. Recommendations are that identifications be increased and that the higher resultant costs be accommodated through greater use of the less intensive interventions. Other suggestions to optimize efficiency include assigning some clients to 14-day inpatient programs instead of 29-day programs; eliminating Awareness Seminar attendance for clients receiving more intensive services; emphasizing group counseling as opposed to individual counseling; and placing reasonable limits on the maximum number of counseling sessions that a client may attend. 216 pp. Biblioq. (Author)

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# **Effectiveness and Cost of Alcohol Rehabilitation in the United States Air Force**

Bruce R. Orvis, David J. Armor, Christine E. Williams,  
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December 1981

A Project AIR FORCE report  
prepared for the  
United States Air Force



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## PREFACE

During the 1970s, the Air Force Alcohol Abuse Control Program evolved from a single treatment center to a comprehensive program involving prevention and rehabilitation services at all bases worldwide. In 1976, the Air Force asked The Rand Corporation to conduct an evaluation of that program, including an assessment of the prevalence of alcohol problems, the effectiveness of prevention efforts, and the cost and benefits of rehabilitation. This report documents the methodology and findings of the rehabilitation assessment, and presents recommendations for policy changes based on these findings.<sup>1</sup> Particular emphasis is given to evaluating the outcomes and costs of differing intensities of intervention. For this reason, the study contributes not only to the Air Force program, but also to the field of alcohol research at large.

The study was conducted under the Project AIR FORCE project "The Cost-Effectiveness of the Air Force Substance Abuse Program."

<sup>1</sup>See also J. Michael Polich and Bruce R. Orvis, *Alcohol Problems: Patterns and Prevalence in the U.S. Air Force*, The Rand Corporation, R-2308-AF, June 1979, and Polly Carpenter-Huffman et al., *The Effectiveness of Air Force Alcohol Education Seminars*, The Rand Corporation, R-2727-AF, September 1981.

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## SUMMARY

This report presents an evaluation of the Air Force Alcohol Rehabilitation Program. It describes the program, assesses the outcome of rehabilitation, examines the program's success in identifying impaired persons for treatment, and compares the cost-effectiveness of different modes of intervention. The results of this evaluation form the basis of recommendations concerning the adequacy and efficiency of current rehabilitation efforts.

The primary data source is a field study conducted at 13 Social Actions programs and 7 Alcohol Rehabilitation Centers (ARCs), which provided a representative sample of clients and programs throughout the Air Force. The field study includes an admission survey, administered to 1115 active-duty personnel admitted for treatment, and a followup survey, conducted about one year later. The followup survey achieved a response rate of over 92 percent for persons remaining on active-duty and approximately 70 percent for separated personnel with valid home addresses.

The Air Force program offers three major types of rehabilitation services—local education about alcohol (Alcohol Awareness Seminar), local outpatient counseling, and centralized inpatient care—and attempts to match the intensity of intervention to the severity of the client's problem. In 1977, 15 percent of all clients received inpatient services, 60 percent received outpatient counseling without inpatient care, and 21 percent attended only the awareness seminar. An additional 4 percent received less intensive miscellaneous services. The study results indicate that most clients received multiple services: almost all clients receiving inpatient services or outpatient counseling attended the awareness seminar, and, with rare exception, inpatients also attended local counseling sessions.

The treatment sample reported serious alcohol-related impairment during the 12 months prior to admission. For most persons, this impairment consisted of multiple instances of work, health, or social/legal problems. However, approximately 16 percent of the sample reported more serious impairment, assessed by a level of alcohol dependence symptoms that suggests physical addiction.

Clients reported substantial improvement after treatment. Although the impairment rate following treatment remained about twice as high as that found in the Air Force as a whole, nearly 70 percent of the clients were free of serious problems after rehabilitation. Moreover, the study results suggest that the less intensive treatments were as effective as the more intensive interventions. Alcohol dependent clients assigned to local outpatient counseling showed remission rates comparable to those of clients receiving centralized inpatient care, and, among less impaired individuals, the awareness seminar, outpatient counseling, and inpatient modes were found to be equally effective.

Several additional analyses yielded similar results. Sensitivity analyses show that the use of different problem measures has little impact on the finding of equal effectiveness, and comparisons between 28-day and 14-day inpatient programs, between large and small numbers of outpatient sessions, and between individual and group counseling services suggest that these interventions had comparable outcomes. Finally, the validity of these findings is supported by several comparisons made between official record information and the survey results.

Cost analyses indicate that alcohol abuse cost the Air Force at least \$62.4 million in 1977. Lost production and medical costs accounted for more than three-fourths of all expenses; in contrast, alcohol control program costs accounted for only about 10 percent of the total figure. Per capita abuse costs varied considerably with severity of impairment; thus, 95 percent of all costs were attributable to the 14 percent of the population that experienced serious problems.

and nearly half of the total was attributable to the 4.6 percent estimated to be alcohol dependent.

Treatment costs were considerably different for the various forms of intervention. The 1977 per capita cost for the 28-day inpatient mode was estimated at more than \$3000, which was largely attributable to the cost of lost duty time and supportive Social Actions services. The outpatient counseling mode was considerably less expensive, at just over \$900 per client. Finally, the awareness seminar was by far the least expensive intervention, costing about \$60 per person.

Given these figures, the study results suggest that the improvement shown following treatment must be maintained over a considerable time span for the cost of the more intensive interventions to be offset by the savings realized from rehabilitated personnel. For dependent clients, more than four years of remission would be required for abuse savings to offset the cost of the 28-day inpatient mode, whereas outpatient counseling costs would be offset after only 21 months. For clients with nondependent problems, potential abuse savings are much lower. Thus, outpatient counseling would require more than four years of remission to reach the breakeven point, and inpatient modes, more than 10 years. In contrast, the awareness seminar would be reasonably cost-effective for nondependent clients, with abuse savings exceeding treatment costs after approximately 16 months. It should be noted that these analyses involve several assumptions concerning potential savings; as a result, the remission periods cited probably represent lower-bound estimates of the time required to offset rehabilitation costs.

Although the data support the effectiveness of existing programs in reducing alcohol abuse, they indicate that less than 10 percent of the persons who experience serious alcohol problems in a given year are currently identified for rehabilitation. Increased emphasis on identification therefore appears warranted. When considered in this light, the cost-effectiveness results take on added importance, because they suggest several steps that could be taken to handle increased caseloads within existing budgetary resources.

To a considerable extent, the present Air Force program emphasizes the more cost-effective treatment methods, in particular by preferring outpatient counseling to inpatient treatment whenever possible. Based on the equal effectiveness findings, however, the Air Force may wish to consider even greater emphasis on less expensive treatment methods. This would mean selection of outpatient counseling for dependent persons and the awareness seminar for nondependent persons whenever possible. Moreover, the results suggest that consideration should be given to reestablishing a 14-day ARC program, which could be used for some clients requiring inpatient care.

To help support the foregoing changes, awareness seminar participation could be eliminated for persons receiving more intensive services; these persons now constitute three-fourths of the attendees. Moreover, the availability of counseling services could be increased substantially by placing limits—say, 30 sessions—on the number of sessions a client could attend. Finally, further resource enhancement could be realized by replacing individual counseling sessions with group sessions whenever possible.

Although the available data do not permit a precise estimate of the dollar savings that would be derived by implementing the foregoing recommendations, they suggest that per capita treatment costs would be decreased without reducing effectiveness. This would allow the Air Force to rehabilitate a greater number of persons who suffer from alcohol problems within existing budgetary resources.

## ACKNOWLEDGMENTS

We wish to express our gratitude to General B. L. Davis, Colonel William King, and Major John Killeen for their interest and support in the formative period of this research and to Colonel Frederick Wagner, Major Frederick Bell, and staff for their assistance throughout its later stages. At Rand, we are indebted to Robert Roll, Michael Rich, Glenn Gotz, Harriet Braiker, Rosalie Kane, Jan Meshkoff, and Polly Carpenter-Huffman for their valuable participation. We are also grateful to Susan Hosek (Rand) and Jack Mendelson (Harvard) for their reviews of this manuscript.

Special thanks are due to all the Social Actions and Alcohol Rehabilitation Center staff members who aided in the conduct of this research, and especially to the staffs at the 20 study locations for their continued cooperation during the two-year fieldwork period. We are also grateful to Colonel Stuart Myers at the Office of the Surgeon General for his advice and assistance. Finally, a great deal of credit goes to May Cohen, Diane Alexander, and particularly to Diane Reingold and the Survey Production Group, for their skill and patience in the preparation of this report and the materials documented therein.

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## Chapter 1

### INTRODUCTION

#### ORIGIN OF THE STUDY

Misuse of alcohol is a serious public health problem in the United States. While it is difficult to determine precisely the number of persons who are affected by alcohol abuse, recent estimates suggest that as many as 20 percent of adult males may suffer some degree of impairment. Among these persons, 7 percent are believed to experience very serious problems such as alcoholism, while the remainder appear to be less seriously affected (Keller, 1975; Cahalan and Room, 1974). The dollar cost of these problems is equally large. A study sponsored by the National Institute on Alcohol Abuse and Alcoholism estimated the cost to be \$31 billion in 1971. Of this figure, less than \$1 billion represented treatment costs; most of the cost was attributed to medical care, lost work productivity, and automobile accidents (Berry and Boland, 1977).

A problem of this magnitude in the general population is also likely to affect the military services. In 1976, the U.S. General Accounting Office emphasized this point by suggesting that alcohol abuse in the military may constitute a more serious problem than drug abuse. The implication was that defense agency expenditures to treat alcohol abuse in FY 1976—\$16.7 million—may have been insufficient in view of the number of military personnel who were likely to be affected by this problem.

The Air Force had been concerned with combating alcohol problems for nearly a decade at the time of the G.A.O. report, and had initiated alcohol abuse control programs on a worldwide basis in 1972. Today, all Air Force bases provide such programs, which include both prevention and rehabilitation components. The prevention component is targeted for the general Air Force population; rehabilitation services are provided for persons who experience alcohol-related problems.

The rehabilitation program incorporates three major types of treatment: education about alcohol, outpatient counseling, and inpatient care. Education (Alcohol Awareness Seminar) and outpatient counseling services are provided in local rehabilitation programs by base Social Actions personnel; inpatient services are available at ten regional Air Force hospital Alcohol Rehabilitation Centers located throughout the world. The intent of the program is to match the intensity of intervention to the severity of the client's problem. Thus, in 1977, approximately 15 percent of all clients referred to the program received inpatient care, and 85 percent received less intensive interventions at the local level. This allocation of treatments differs considerably from that used in several other large programs; in particular, it differs from the heavy emphasis of inpatient treatment in the U.S. Navy program.

The Air Force rehabilitation program evolved without benefit of systematic information regarding treatment effectiveness. The need for such information, and a general concern about primary reliance on outpatient services, led the Air Force to ask Rand to evaluate the rehabilitation effort. In 1977, Rand initiated a large scale study to accomplish this objective. The results of this study are documented in the present report.

#### RESEARCH QUESTIONS AND CONTEXT

The goal of this research is to answer several important questions about the efficacy and cost-effectiveness of the treatment services provided by the rehabilitation program. The basic

issues concerning efficacy are whether clients are free of serious alcohol problems after receiving rehabilitation services and whether some of the services are more effective than others. We are especially concerned with the relative effectiveness of local rehabilitation as opposed to inpatient treatment and, at the local level, with the efficacy of the awareness seminar as compared with outpatient counseling. In addressing these issues, we will examine the related issue of whether the relative effectiveness of the different treatment modalities depends on the severity of impairment at admission.

Our second major purpose is to use the outcome results in conjunction with other data to examine the cost of rehabilitation and the conditions under which treatment costs are offset by the savings realized from rehabilitated personnel, both for the program as a whole and for each mode of intervention in particular. We will also determine the proportion of the total problem population that is now identified and treated, which will shed light on the desirability of expanding the current program. If expansion is indicated, the treatment and cost results will be used to suggest effective means of rehabilitating an increased number of alcohol clients within existing budgetary resources.

To address these issues, we collected a large amount of systematic information concerning the rehabilitation program, the services received by the program entrants in our study, and the alcohol problems experienced by these persons before and after treatment. This information includes data from official records, special staff interviews, and a field study of 20 representative Social Actions and Alcohol Rehabilitation Center programs.

Persons entering the alcohol rehabilitation programs at the 20 study locations from June 1977 through May 1978 completed admission questionnaires concerning the alcohol problems they had experienced during the preceding 12 months. In total, the questionnaire was administered to 1115 active-duty respondents, representing 15 percent of all new clients throughout the Air Force during the initial assessment period. The respondents were then followed up about one year later and were administered a second survey. The followup questionnaire was completed by more than 92 percent of the clients remaining on active duty and by approximately 70 percent of the separated personnel with valid home addresses. It provided information on posttreatment problems the respondent may have experienced and on the services he received during rehabilitation. Detailed treatment records for each client were also provided to Rand on a continuing basis by Social Actions and ARC personnel, using two special forms designed for this purpose—the Treatment Disposition Form and the Client Services Report.<sup>1</sup>

It was our intention to evaluate the Air Force Alcohol Rehabilitation Program as it actually operates in the field. We therefore relied on the normal treatment and assignment procedures used by program personnel, instead of introducing experimental variations. Compared with a randomized experimental design, this approach has the advantage of providing information about the treatment assignment process and of ensuring that the rehabilitation modes compared operate as they would in everyday practice. Moreover, the natural field study avoids the ethical and logistical complexities associated with the use of randomized experimental procedures in a population of persons suffering from alcohol problems.

The field approach, however, places certain limitations on the conclusions that may be drawn from the study results. First, because persons with serious problems almost always receive rehabilitation services after identification, a no-treatment condition does not exist in the field. Hence, the contribution of natural remission to improvement shown by program entrants cannot be assessed. Second, because clients were assigned to treatment by normal rather than random procedures, the admission characteristics of clients assigned to different modes could vary in important ways that may affect posttreatment status. This potential problem is nearly universal in alcohol treatment research, and we have undertaken the stan-

<sup>1</sup>A detailed discussion of the study procedures is presented in Appendix A. The admission questionnaire is shown in Appendix B, and the followup questionnaire, in Appendix C. Appendix D illustrates the survey administration materials. The Treatment Disposition Form and Client Services Report are shown in Appendix E.

dard control by adjusting statistically for variations in admission characteristics when comparing outcomes for the different modalities. Moreover, we have dichotomized clients according to the severity of their alcohol problems at admission, and have made separate comparisons among the treatment modes for the clients in each impairment group. This direct control for impairment differences is especially important. The reason is that the higher impairment levels found among clients assigned to intensive rehabilitation modes are attributable largely to different treatment assignment patterns for the two impairment groups, whereas impairment differences among clients receiving different interventions within each group are comparatively small. It should be noted, nonetheless, that it would be necessary to replicate the field study findings in a randomized experiment before they could truly be regarded as definitive.

Finally, although this research takes place in a military environment, it does not stand in isolation. The alcohol problems we have assessed are the same as those found in the civilian population. Moreover, the rehabilitation services comprising the Air Force program—education about alcohol, outpatient counseling, and inpatient care—are common elements in programs designed to combat civilian alcohol abuse. Therefore, the results reported here should not be considered unique to the Air Force population, but should be viewed in the larger context of the growing body of literature concerning the effectiveness of various interventions in treating alcohol-related problems.

## PLAN OF THE REPORT

Chapter 2 provides detailed information concerning the operation of the alcohol rehabilitation program. In Chapter 3, we evaluate the effectiveness of the rehabilitation program and compare the results of different interventions. In Chapter 4, we estimate the cost of alcohol abuse to the Air Force and, using the effectiveness results, assess the conditions under which treatment costs are offset by the savings realized from rehabilitated personnel. Chapter 5 summarizes our conclusions and presents our policy recommendations.

## Chapter 2

### THE AIR FORCE ALCOHOL REHABILITATION PROGRAM

This chapter describes the objectives and characteristics of the Air Force Alcohol Rehabilitation Program. We discuss Air Force policy regarding rehabilitation and treatment, review the program's development, and describe the present-day program. Our discussion of the current program includes detailed information about the types of services administered and the characteristics of the staffs providing these services.

#### ALCOHOL ABUSE POLICY

The official Air Force policy on alcohol abuse is

to prevent alcohol abuse and alcoholism among its members and their dependents (and) to attempt to restore to effective functioning persons with problems attributable to alcohol abuse. . . . (AFR 30-2)

To accomplish these objectives, the Air Force has instituted both prevention and rehabilitation programs. The efficacy of the rehabilitation effort is the subject of the present report.<sup>1</sup>

The Air Force defines alcohol abuse as "any use of alcohol that leads to a person's misconduct or unacceptable social behavior; or to the impairment of duty performance, physical or mental health, financial responsibility, or personal relationships." *Alcohol abusers, by this definition, fall into one of two basic types:*

1. *The alcoholic*—who has been diagnosed by a competent medical authority as suffering from the effects of alcoholism.<sup>2</sup>
2. *The problem drinker*—whose misuse of alcohol has resulted in difficulties in one or more of the above areas, but who is not diagnosed as an alcoholic.

A designation of alcoholism is based on a diagnosis of "psychological or physical dependency on alcohol."<sup>3</sup> Alcohol abusers may be termed problem drinkers only after the circumstances surrounding their use of alcohol are evaluated and it is determined that they are not alcoholics.

Air Force personnel with alcohol-related problems are identified for entry into the rehabilitation program through one of the following channels: (1) self-referral; (2) referral by commander or supervisor; (3) medical or hospital referral; or (4) referral from other sources such as military or civilian police. Among the possible indicators for referral are deteriorating duty performance (including excessive tardiness, absenteeism, and frequent errors in judgment), repeated alcohol-related incidents (DWIs, fights, etc.), and problems with personal relationships or finances. The emphasis in identification is on an individual's demonstrated behavior, not on the consumption of alcohol in itself. Corrective action is taken only when the

<sup>1</sup>The prevention program is the subject of a separate Rand evaluation by Carpenter-Huffman et al., September 1981.

<sup>2</sup>Department of the Air Force, "Social Actions Program," AFR 30-2, p. 5-1.

<sup>3</sup>*Ibid.* The Rand study makes a similar distinction between dependent and nondependent problems; see Chapter 3.

effects of alcohol use are manifested in impairment of duty performance, social behavior, or physical or mental health.

Regardless of the source of identification, the individual's unit commander is notified and is subsequently responsible for formally entering the individual into rehabilitation. This is accomplished by filing Air Force Form 1611, on which the unit commander indicates both the means of identification and the individual's level of abuse (problem drinker or alcoholic).<sup>4</sup>

All persons entering rehabilitation must complete the program as a condition for remaining in the Air Force. If rehabilitation fails because the person does not make progress or leaves the program prior to completion, he or she is considered for separation from the Air Force. A recommendation for separation is based on the individual's continued failure to meet Air Force standards of behavior, and not because of prior identification as an alcohol abuser. Once separated, the individual is referred to Veterans Administration alcohol treatment centers and other related agencies for further treatment.

As long as a rehabilitation program entrant successfully completes the program and avoids relapse, there is no official adverse affect on promotion, reenlistment, duty assignments, or security clearance. During the rehabilitation phase, however, restrictions may be placed in some of these areas. For example, diagnosed alcoholics are not allowed access to classified information or unescorted entry to restricted areas until they have successfully completed the program and received subsequent authorization. Similarly, individuals whose terms of service expire while they are in the program are not allowed to reenlist; however, their current terms may be extended for the period of time necessary for them to complete the program and demonstrate eligibility.<sup>5</sup>

The chain of command for the Air Force Alcohol Rehabilitation Program starts at the individual Air Force base, where the Social Actions office is responsible for developing alcohol programs at the local level.<sup>6</sup> The official objectives of Social Actions are directed toward "resolving, eliminating or neutralizing the social and cultural conditions that have a direct negative impact on mission effectiveness" and toward "maintaining Air Force standards of performance and conduct."<sup>7</sup> Social Actions works closely with the senior installation commander in identifying and resolving problems surrounding these objectives and in making referrals to other agencies when necessary. A local Drug and Alcohol Abuse Control Committee (DAACC) has full responsibility for all aspects of alcohol abuse prevention, identification, and rehabilitation. The DAACC establishes local goals and objectives within the framework of the guidelines set by Air Force Headquarters (Hq USAF), monitors results, and ultimately reports to the base commander.

DAACCs also exist at the Major Air Command (MAJCOM) level, but have broader, commandwide responsibilities. They oversee the activities of the alcohol abuse programs at installations under their jurisdiction, identify problem areas, and ensure that regulations are followed. With Hq USAF approval, a MAJCOM may add a supplement to the set of program regulations issued by Headquarters, which then applies to all bases within that command.

At the top of the chain is the Drug and Alcohol Abuse Control Office at Hq USAF, which formulates overall Air Force policy and has ultimate responsibility for all programs. Broad policy for all the military services is set by the Office of Drug and Alcohol Abuse Prevention, under the jurisdiction of the Office of the Assistant Secretary of Defense for Health Affairs.

<sup>4</sup>The unit commander must rely on a physician's diagnosis of alcoholism to indicate this classification on the form.

<sup>5</sup>Self-referred program entrants who have not shown impairment of duty performance may be permitted to reenlist while in treatment.

<sup>6</sup>Social Actions is also responsible for programs dealing with drug abuse, discrimination, and human relations problems.

<sup>7</sup>Department of the Air Force, "Social Actions Program," AFR 30-2, p. 1-1.

## PROGRAM ORGANIZATION

The forerunner of the current Air Force Alcohol Rehabilitation Program was the Alcoholism Treatment Center established in 1966 at Wright-Patterson Air Force Base in Dayton, Ohio. This center represented the primary Air Force effort to deal with alcohol problems until 1972, when alcohol abuse control programs were established at 140 Air Force installations worldwide. In the beginning, individual programs were permitted to operate independently within broad Air Force regulations and guidelines; as a result, programs differed widely according to the ability, dedication, and personal orientation of individual program managers. In 1976, the Air Force adopted a more uniform policy designed to establish quality control. This was achieved through a systems management approach that provided direction and guidance to all programs while permitting desirable local variations in program content. Today, all Air Force installations are capable of offering education, counseling, and rehabilitation to individuals with alcohol-related problems.

Air Force rehabilitation efforts have evolved into a relatively uniform program with three distinct but interlocking major components: the Alcohol Awareness Seminar, Social Actions outpatient counseling, and inpatient care at regional Alcohol Rehabilitation Centers. In addition, a variety of other agencies are frequently called upon to complement these services. These include base medical units, base chaplain programs, base Security Police, Alcoholics Anonymous, Al-Anon, and Alateen.

A person who is formally entered into rehabilitation may follow one of several pathways involving one or more of the program components. The rehabilitation regimen varies, depending on the means of identification, the severity of the problem, local program policy, and the individual's demonstrated progress while in the program. Certain preliminary procedures are common to all pathways, however. First, newly identified individuals receive an intake interview, conducted by an alcohol abuse representative from the base Social Actions office. During the interview, information is gathered to assess the nature and extent of the person's *drinking problem*, and the rehabilitation program is explained. Information may also be solicited from other sources having knowledge about the individual (e.g., the base chaplain or Security Police). Persons who appear to have severe alcohol-related problems are referred to the base medical services unit for a medical evaluation (and detoxification, if this is deemed necessary).

Following the intake interview, a Rehabilitation Committee is formed. The committee comprises, as a minimum, the individual's unit commander, immediate supervisor, a drug and alcohol abuse control representative, and a medical services staff representative. The first task of the committee is to evaluate the client and establish a regimen designed to meet his needs within the framework of the program's overall guidelines. It continues to play an integral role throughout the rehabilitation process, meeting regularly (at least quarterly) while the client remains in rehabilitation to monitor progress and to adjust the prescribed regimen as necessary. These duties include decisions concerning the length of time that the individual will remain in each phase of rehabilitation, whether referral to other program components is required, and when the client has successfully completed the program. If the committee believes that an individual is not making progress, it can recommend separation because of failure to meet Air Force standards.

### Alcohol Awareness Seminar

The Alcohol Awareness Seminar consists of eight hours of group meetings, which are usually divided into two four-hour sessions. It is held at regular intervals at all bases and is led by Social Actions staff members. The seminar covers the impact of alcohol abuse on an individual's Air Force career and his/her economic and social life; it also provides information



about other alcohol programs and agencies, such as Alcoholics Anonymous. In addition, instructors offer personalized assistance to participants in evaluating their drinking habits.

Most individuals entering the rehabilitation program are directed to attend the Alcohol Awareness Seminar as part of their prescribed regimens. Certain persons (e.g., those arrested for one-time incidents or DWIs) may also be required to attend the seminar even though they have not been formally entered into the program. For these persons, the seminar not only provides alcohol education, but is used as a diagnostic tool to determine whether more intensive rehabilitation is necessary. The decision is made after the individual completes the seminar, receives further evaluation, and has his recent job performance reviewed. If these assessments indicate that the problem is serious, he is then formally entered into the rehabilitation program; otherwise, no further intervention is undertaken.

### **Social Actions Outpatient Counseling**

The second program component consists of formal outpatient counseling administered by the local Social Actions office. This is the type of rehabilitation chosen for the majority of Air Force alcohol abusers. In comparison with inpatient treatment, it has the advantage of being minimally disruptive to the individual's job responsibilities and normal activities.

The counseling regimen has two phases: Local Rehabilitation and Follow-on Support. The Local phase consists of group and/or individual counseling sessions conducted by Social Actions staff members. Supplemental services may include marital or family counseling; occupational, recreational, or legal counseling; referral to other base facilities for medical or religious counseling; or referral to Alcoholics Anonymous (AA) meetings. The number of counseling sessions attended and the extent of any additional services depend on the nature of the client's problem and local policy. Typically, Local Rehabilitation continues for one to three months, depending on the progress shown by the client.

After individuals complete the intensive counseling phase, they enter Follow-on Support as the final step before completing the program.<sup>a</sup> The Follow-on phase is designed to assist clients by allowing them to demonstrate normal functioning in work and social situations, with a minimum of structured intervention. During this phase, individuals receive the same types of services as those received in Local, but with diminished frequency. Periodic attendance of group sessions is the usual requirement for "active" Follow-on status, which is typically followed by "inactive" Follow-on (the individual is monitored but attends no groups). The length of time spent in Follow-on is from two months to one year, depending on the severity of the individual's problem and the amount of progress shown. Generally, problem drinkers are required to spend a minimum of time in this phase, while diagnosed alcoholics and others with very serious problems must remain in Follow-on for one year. Should an individual experience a relapse while in this phase, he/she is not automatically considered a treatment failure as long as some progress has been demonstrated. The Rehabilitation Committee determines whether the relapse is grounds for reentry into Local Rehabilitation, entry into an Alcohol Rehabilitation Center, or a recommendation for separation.

Table 2.1 summarizes the group and individual counseling services received by study clients assigned to Social Actions Outpatient programs. The median number of total sessions was 11.4. Some clients, however, attended very large numbers of sessions; thus, the mean number of sessions was somewhat higher (16.4 sessions). Group sessions were the primary counseling medium, accounting for three-fourths of the sessions attended.

<sup>a</sup>Likewise, all persons returning from Alcohol Rehabilitation Centers must also enter Social Actions Follow-on at their home bases.

Table 2.1

NUMBER OF SESSIONS ATTENDED BY STUDY CLIENTS  
ASSIGNED TO OUTPATIENT COUNSELING MODE

Type of Session	Number of Sessions Attended	
	Median	Mean
Group counseling	7.1	12.5
Individual counseling	2.3	3.9
Total	11.4	16.4

### Alcohol Rehabilitation Center Inpatient Care

The Alcohol Rehabilitation Center component of the Air Force program is offered at 10 regional Air Force hospitals. Seven of these hospitals are located at bases within the continental U.S., and three are at overseas bases. Referral patterns have been established so that each center treats clients referred from bases within a specified geographic area.

The rehabilitation center program consists of inpatient care for individuals considered to have serious alcohol-related problems. This is the most intensive rehabilitation program component offered by the Air Force. Some individuals are referred to Alcohol Rehabilitation Centers when outpatient counseling proves unsuccessful. However, if the alcohol problem is deemed sufficiently serious upon identification, the client can be referred directly to a rehabilitation center.

At the time of our study, the rehabilitation centers employed two programs:

1. *A 28-day program*—stressing education about alcohol and promoting insight, mainly through group and individual therapy sessions.
2. *A 14-day program*—modeled after the electrostimulation aversion approach to therapy, including extensive counseling and a "recap" readmission to the center two months after discharge (for two days of further counseling to reinforce the earlier treatment).

Two rehabilitation centers used the 14-day program, whereas the remaining eight employed the 28-day program. At the present time, all 10 centers use the 28-day program.

Standard inpatient services in both programs included group counseling sessions, individual counseling, education about alcohol, recreational and occupational therapy, relaxation therapy, and health counseling. In addition, approximately half of the study clients underwent detoxification at the rehabilitation centers, and one-third were given Antabuse. Much smaller percentages reported receiving other drugs, attending family counseling sessions, or participating in Alcoholics Anonymous meetings.

### ATTENDANCE OF PROGRAM COMPONENTS

Total program attendance figures for 1977 and 1978 are shown in Table 2.2, which classifies clients according to the most intensive program component they attended. All individuals who participated in the rehabilitation program are included, regardless of whether AF Forms 1611 were filed. The attendance figures were derived by determining the proportion of our

study participants in each program component for whom Form 1611 was filed.<sup>9</sup> The number of persons formally entered into each component according to the Social Actions Statistical Summary was then multiplied by the reciprocal of the appropriate proportion, yielding the adjusted numbers in Table 2.2.

Table 2.2

PROGRAM ATTENDANCE BY COMPONENT

Component	Number of Attendees	
	1977	1978
Inpatient (ARC)	1194	1252
Outpatient counseling (no ARC)	4850	4297
Alcohol Awareness Seminar (no ARC or outpatient counseling)	1729	1532
Other Social Actions services only	350	310
Total	8123	7391

There was a modest decrease from 1977 to 1978 in the number of individuals who entered local rehabilitation programs; enrollment at the Alcohol Rehabilitation Centers, however, remained relatively constant. Most persons rehabilitated at the local level (i.e., those not receiving inpatient treatment) were assigned to counseling services. A sizeable minority, however, attended the awareness seminar without receiving outpatient sessions. In contrast, only a few received other Social Actions services alone (e.g., screening interview, drugs, etc.).

Although the three primary rehabilitation components (i.e., inpatient treatment, outpatient counseling, and the Alcohol Awareness Seminar) may be treated as separate entities in terms of program organization and content, the study data indicate that most clients received more than one component. Individuals who received the intensive components normally also received those that were less intensive. For example, most clients assigned to inpatient treatment and outpatient counseling also attended the Alcohol Awareness Seminar. Similarly, Alcohol Rehabilitation Center clients typically attended even more counseling sessions at Social Actions than did clients assigned to the local outpatient component. The overlap in assignments to the primary rehabilitation components is summarized in Table 2.3.

## REHABILITATION STAFF

In total, 117 staff members were interviewed, including 65 at Social Actions programs and 52 at the Alcohol Rehabilitation Centers. The size of the rehabilitation staff at these programs ranged from 3 to 9 individuals for Social Actions and from 5 to 16 for the rehabilitation centers. The average Alcohol Rehabilitation Center staff member had not served in (or worked for) the Air Force as long as his/her Social Actions counterpart. Among Social Actions staff, 77 percent had served at least four years, compared with 60 percent for the rehabilitation centers. Moreover, 62 percent of the Social Actions personnel interviewed had served 15 years or longer, compared with 22 percent of the ARC staff.

<sup>9</sup>The study data suggest that 1611s are filed for only about 20 percent of the individuals who simply attend the awareness seminar or receive other less intensive services. In contrast, 1611s appear to be filed for nearly all persons assigned to outpatient counseling or, especially, inpatient care.

Table 2.3

**OVERLAP IN ASSIGNMENTS TO PRIMARY  
REHABILITATION COMPONENTS**

Characteristic	Rehabilitation Component	
	Inpatient Treatment	Outpatient Counseling
Percentage of entrants attending Alcohol Awareness Seminar	90	81
Median counseling sessions attended at Social Actions	18	11

Table 2.4 summarizes the pay grades and duty AFSCs held by the Social Actions and Alcohol Rehabilitation Center staff members at the 20 study locations. The greater seniority of the Social Actions personnel is reflected in the high concentration of grades E5-E9 among enlisted staff members. The table also shows that Social Actions programs were staffed with more civilian employees or volunteers. In contrast, the rehabilitation centers employed more officers; this difference was attributable to nurses working at the ARCs (AFSC 9726).

Table 2.4

**DISTRIBUTION OF PAY GRADES AND DUTY AFSCs FOR  
REHABILITATION STAFF**

Program	Duty AFSC	Percent of Staff in Pay Grades			
		E1-E4	E5-E9	O1-O6	Civilian
Social Actions	734X0	6	41	0	0
	73XX	0	0	25	0
	Other	3	3	6	16
	Total	9	44	31	16
Alcohol Rehabilitation Center	914XX	23	13	0	0
	91XX	0	0	21	0
	9726	0	0	27	0
	Other	0	6	8	2
	Total	23	19	56	2

Fifty-one percent of the staff members were college graduates, and 32 percent had received postgraduate degrees. Three-fourths of the remaining staff had completed at least one year of college. With a single exception, all programs employed at least one person with a postgraduate degree; in some cases, there were as many as six such persons.

Several fields were represented among staff members with bachelor degrees; these included psychology, sociology, education, counseling, and nursing. At the masters level, human relations, education, counseling, and social work were represented. Finally, 7 percent held doctoral degrees in psychology or psychiatry.

Most Social Actions personnel (77 percent) had attended the nine-week Social Actions training course at Lackland AFB. In contrast, only 17 percent of the rehabilitation center staff had attended this course. This difference reflects both the presence of support staff at the

ARCs and the fact that ARC treatment staff typically receive drug/alcohol training during their formal education. Other training media included the Johnson Institute Regional Workshop on Alcoholism in Minneapolis (24 percent, overall), special college or university courses (14 percent), on-the-job training at other military or civilian alcohol treatment programs (16 percent), and various other workshops, seminars, or conferences (64 percent). Although most staff had received training, few individuals had long careers in alcohol abuse treatment. Only 17 percent had worked in this field for more than five years, and 50 percent had been involved for two years or less.

Program staff members were asked to characterize their approach or orientation to therapy. The majority (68 percent) named two or more approaches, and 34 percent named at least three methods. Most stressed the importance of teaching clients to "deal with the here and now," persuading them to accept the reality of their alcohol problems, and convincing them of the potential consequences of continued alcohol abuse on their lives and Air Force careers.

Staff members were also asked whether they felt total abstinence or reduced consumption was the most appropriate goal. Ninety-six percent of those interviewed felt that their alcoholic clients should strive for complete abstinence. There was some difference of opinion, however, concerning the appropriate goal for problem drinkers. Whereas only 22 percent of the Social Actions staff felt that abstinence was required, 52 percent at the rehabilitation centers favored this goal.

## PROGRAM VARIATIONS

All programs in the Rand study operated within the Air Force guidelines governing local policy on identification and entry into rehabilitation, program structure and content, and requirements for successful completion. Among Alcohol Rehabilitation Center programs, little variation was observed beyond that associated with the 28-day versus 14-day format, described previously. Social Actions programs, however, varied somewhat in certain aspects.

One Social Actions variation concerned the criteria for formal identification. Most commands permitted clients to attend the Alcohol Awareness Seminar without having Form 1611 filed, provided further rehabilitation was not required. Programs at Air Training Command bases went one step further, allowing clients to complete a four-week "control program" before a decision concerning formal identification was made. The control program included the initial interview, awareness seminar, and limited counseling services.<sup>10</sup> In contrast, Military Airlift Command programs required that Form 1611 be filed for all individuals receiving any rehabilitation services whatsoever.

There were some differences from base to base both in the average number of counseling sessions given per client and in the format of these sessions. For example, small programs could not always assemble enough clients to form group sessions; in these instances, individual counseling was substituted. Other programs combined alcohol and drug abusers in group counseling sessions; this appeared to be a function of program policy rather than size, however.

Finally, the Alcohol Recovery Program at Nellis AFB had a unique format. For the first 10 days of the program, participants resided in a temporary living facility and attended an intensive series of group counseling sessions, educational presentations, and discussions (up to six meetings per day).<sup>11</sup> The Alcoholics Anonymous approach was emphasized, and all participants were required to abstain from drinking during this period. Clients then returned

<sup>10</sup>All individuals who entered the control program were included in our study, and all services received as part of this program were counted.

<sup>11</sup>A six-week "night option" program was also available, which was designed to allow family participation and minimize interference with duty performance.

to their homes and jobs, and attended one group session daily for the next 10 days. At this point, the Rehabilitation Committee determined what further services were necessary; individuals could be placed in active or inactive Follow-on status, or could be considered for discharge if there had been no progress or motivation to improve.

## SUMMARY

The official policy of the Air Force is to attempt to rehabilitate all individuals with problems related to the abuse of alcohol. To accomplish this objective, the Air Force has developed a comprehensive rehabilitation program, in which all bases participate. The program offers three major types of treatment: education about alcohol (awareness seminar), outpatient counseling, and inpatient care. The education and counseling components are provided by base Social Actions personnel; inpatient care is offered at ten regional Air Force hospital Alcohol Rehabilitation Centers.

The vast majority of alcohol clients are assigned to local rehabilitation programs. Among these individuals, more than two-thirds receive outpatient counseling services; the remainder are normally required to attend the awareness seminar. In contrast, about 15 percent of all program entrants are assigned to centralized inpatient treatment. Although the three program components are conceptually distinct, treatment assignments are made hierarchically. Nearly all persons assigned to inpatient treatment also receive counseling services at the local level, and the vast majority of the inpatient and outpatient counseling clients attend the awareness seminar.

At some installations, normally as a function of command policy, individuals may be permitted to attend the awareness seminar and receive other minimal services prior to formal entry into the program. A decision is then made about whether the person's problem is sufficiently serious to warrant further intervention. All clients formally entered must complete the program to remain in the Air Force; completion is based on the client's ability to meet official standards of behavior. A Rehabilitation Committee—composed of the client's unit commander, immediate supervisor, a medical services representative, and a Social Actions drug and alcohol abuse control representative—establishes an initial treatment regimen for the client, monitors his/her progress, modifies the regimen if required, and determines whether the client has successfully completed the program.

The vast majority of drug/alcohol staff members at the Social Actions study programs had attended the drug/alcohol training course at Lackland AFB; in contrast, the staff members providing treatment at the ARCs typically received drug/alcohol training during their formal education. Most staff indicated more than one approach to therapy. For the majority, however, therapy consisted in part of persuading clients to accept the reality of their problems and the negative potential consequences of continued alcohol misuse on their lives and careers.

## Chapter 3

### EFFECTIVENESS OF THE ALCOHOL REHABILITATION PROGRAM

A major objective of this research is to evaluate the effectiveness of the Air Force Alcohol Rehabilitation Program. Three issues will guide this evaluation. First, are program entrants free of serious alcohol problems after receiving rehabilitation services? Second, what portion of the problem population is identified for treatment? Third, are the less intensive rehabilitation modes as effective as the more intensive interventions? In the last regard, we are particularly interested in determining whether local rehabilitation is as effective as the inpatient mode, whether the awareness seminar is as effective as more intensive outpatient counseling, and whether the relative effectiveness of these treatment modes depends on the severity of impairment at admission to the program. This chapter presents results bearing on each of these issues.

We begin by examining the rates of alcohol problems experienced by program entrants during the year prior to admission. We then compare the rates with the problems experienced by these individuals after treatment. Next, we estimate the penetration rate into the total problem population. We then compare the effectiveness of the awareness seminar, outpatient counseling, and inpatient modes. This discussion is followed by a further comparison of outcomes for other classifications of the intensity of treatment received (i.e., shorter versus longer terms of treatment and group versus individual counseling). In the final section of the chapter, we present data dealing with the sensitivity of our results to variations in the problem measures used to assess treatment effectiveness (e.g., alcohol consumption patterns as opposed to alcohol problem rates). We conclude with results bearing on the validity of the self-reports obtained from our survey respondents.

#### ALCOHOL PROBLEMS AT ADMISSION AND FOLLOWUP

Our measures of alcohol problems were developed during the Rand Prevalence Study (Polich and Orvis, 1979) and are described in detail in that report. The measures assess 16 serious problems that the respondent may have experienced during the past year. These include frequent symptoms of alcohol dependence and 15 types of work, health, or social/legal impairment.<sup>1</sup> The percentages of the treatment sample reporting the 16 problems during the year prior to admission are shown in Table 3.1. For the purpose of comparison, the Prevalence data indicating the rates throughout the Air Force for the comparable period are shown in the rightmost column of the table.<sup>2</sup>

The results presented in Table 3.1 have two prominent features, both suggesting serious impairment of the treatment sample during the 12 months prior to admission. First, the

<sup>1</sup>A high level of alcohol dependence symptoms was defined as a total of 48 or more instances of blackouts, gross tremor, drinking immediately after awakening, or being unable to stop drinking before becoming intoxicated during the past year. High levels of these symptoms have been shown to indicate very serious alcohol-related impairment.

<sup>2</sup>Two days of hospitalization (overnight stay) and two visits to a physician were required for these indicators of physical damage. The work-loss index combined instances of alcohol-related absences (1 day per occurrence), reduced efficiency (1/4 day), arriving late or leaving early (1/4 day), and being high on duty (1/4 day for each occurrence beyond instances of reduced efficiency). Treatment-related absences were not included. An average daily consumption of 5 or more ounces of ethanol (10 or more drinks) was required as evidence of presumptive liver damage.

percentage of the sample reporting each problem is higher than the corresponding rate throughout the Air Force for every measure shown in Table 3.1. This is the case not only for overt incidents involving interaction with other Air Force personnel in an official capacity (e.g., punishment, hospitalization, or arrests for DWI), which one might associate with referral to the program, but also for problems that are more private in nature. For example, 16.1 percent of the treatment sample reported experiencing high levels of alcohol dependence symptoms, compared with 4.6 percent of the general Air Force population.

Table 3.1

PROBLEM RATES FOR ADMISSION SAMPLE AND  
AIR FORCE POPULATION<sup>a</sup>

Problem	Percent Reporting Problem (past year)	
	Admission Sample	Air Force Population
Dependence Symptomatology	16.1	4.6
Work Impairment		
Lower performance rating	10.4	1.5
Loss of 3 working days	16.2	4.5
Physical Damage		
Illness lasting one week	3.6	1.2
Hospitalization	15.1	1.8
Visits to physician	7.1	1.5
Accident with self-injury	8.5	1.5
Accident with injury to others or property damage	10.0	1.9
Damaging consumption level	7.4	3.7
Social Disruption		
Spouse left	4.0	0.6
Spouse threatened to leave	11.4	0.7
DWI arrest	33.3	1.8
Nondriving arrest	9.2	1.3
Jailed	22.1	1.6
Fights	21.4	3.5
Official punishment	33.0	1.9

<sup>a</sup>The admission sample rates are weighted to reflect the true proportions of ARC and local program entrants. The Air Force rates were assessed by the Prevalence Study, 1977.

Second, the rates for the 16 problems sum to more than 100 percent. This reflects the fact that the majority of clients experienced more than one serious problem during the year prior to admission. This was particularly true for persons with high levels of alcohol dependence symptoms. Although there is no relationship between the symptomatology definition and the 15 nondependent types of problems assessed, the data show that 95 percent of these persons also reported at least one nondependent problem, and 82 percent reported two or more of the 15 problems. Moreover, even among persons with lower levels of dependence symptoms, two-thirds reported at least two nondependent problems during the year prior to admission.<sup>3</sup>

<sup>3</sup>Although it is apparent that in some cases multiple problems can result from a single serious incident (e.g., a DWI arrest because of an alcohol-related accident), it is equally clear that such cases do not account for all reports of multiple problems. Indeed, this is certainly not the reason for relations between high levels of dependence symptoms or alcohol consumption and the remaining problems, since these measures are independent by definition.



Our analysis combines the 16 measures shown in Table 3.1 into an overall measure that distinguishes two types of problems:

1. *Alcohol Dependence*—reflecting very serious alcohol-related impairment, as defined by a level of alcohol dependence symptoms that suggests physical addiction.
2. *Nondependent Problems*—reflecting serious alcohol-related impairment without high levels of dependence symptomatology, as assessed by one or more of the 15 remaining indicators of alcohol problems.

The results for the overall measure are shown in Fig. 3.1, which presents the problem rate for the treatment sample during the year prior to admission to the rehabilitation program and again at followup, about one year later.<sup>4</sup>

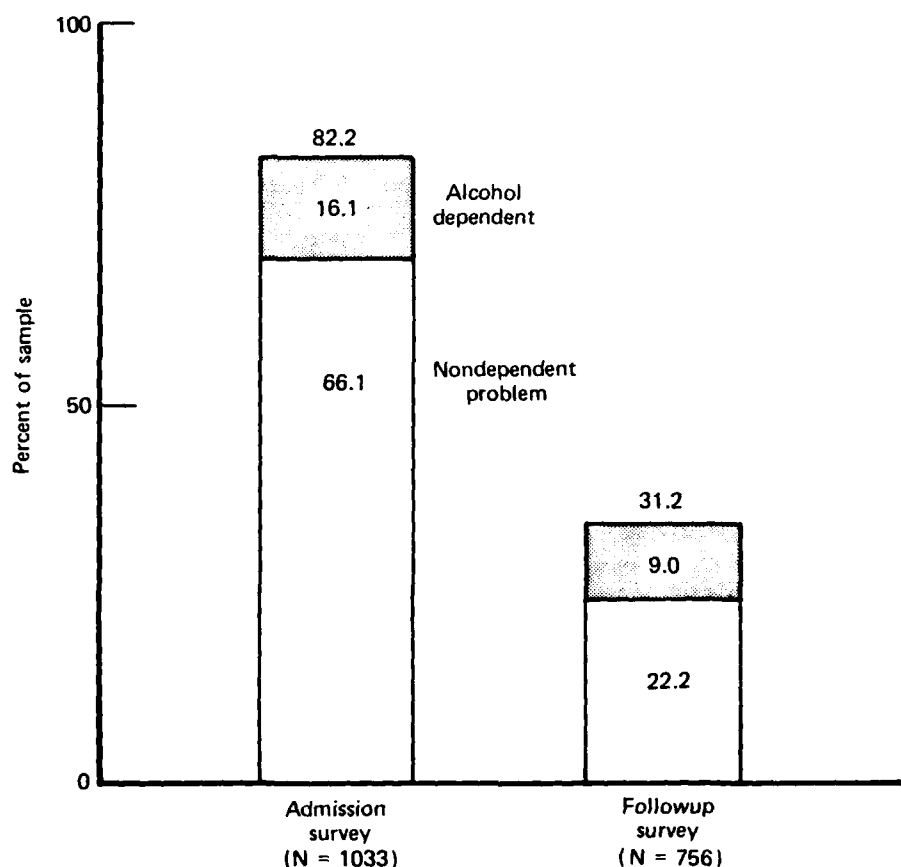
The data indicate that 82.2 percent of the sample reported one or more serious problems prior to admission. A minority—16.1 percent—reported very high levels of alcohol dependence symptoms (one or more per week, on average). A considerably larger group—66.1 percent—reported lower levels of dependence symptoms, but indicated at least one non-dependent problem. In addition to the 82.2 percent reporting problems, the data show that a small group—comprising 17.8 percent of the admission sample—did not report the 16 problems included in the overall measure. We have examined the data for these individuals in detail. Our analysis finds that about half of them have some indication of an alcohol problem during the year prior to admission. This group is composed of persons who experienced a problem not included among the 16 types of impairment in the overall measure, individuals who indicated some of the 16 problems in other portions of the questionnaire but who, through misunderstanding or carelessness, did not do so on the key items, and, perhaps, some cases of underreporting. The remaining group is composed of persons who, by and large, appear to have experienced some alcohol-related incident that resulted in contact with the rehabilitation program, but not the kinds of serious problems included in the overall measure. Examples of such incidents include food throwing, altercations in clubs, and so forth.

The results of the followup survey indicate that clients experienced substantial improvement after treatment. As shown in Fig. 3.1, a significant reduction in the number of persons reporting serious problems of more than 50 percentage points occurred during the followup assessment period, as compared with the year prior to admission. The lower rate at followup reflects significant reductions both in the percentage of the sample reporting high levels of alcohol dependence symptoms (9.0 percent versus 16.1 percent at admission) and, in particular, in the number of persons reporting nondependent problems (22.2 percent versus 66.1 percent at admission,  $p < .001$  by chi-square test in both cases). Although there was clearly considerable improvement at followup, it should also be noted that the respondents apparently continued to experience a rate of alcohol problems twice as great as that found in the general Air Force population, even after treatment.<sup>5</sup>

The results in Fig. 3.1 include the data provided by persons who separated from the Air Force and by those who remained on active duty. Since the findings for persons remaining on active duty are especially important for the cost-effectiveness analysis presented in the next chapter and, moreover, are of particular interest to the Air Force, the followup results are presented separately for the two groups in Table 3.2. Both groups had an overall problem rate

<sup>4</sup>The followup data reflect minor definitional adjustments made to accommodate individuals who completed the followup questionnaire within one year of admission and, therefore, answered for a narrower time frame than the one-year period used for most respondents. These adjustments are described in Appendix F. Because the problem rates at admission for the subsample that completed the followup questionnaire were nearly identical to those for the full admission sample, the admission results describe the data for the full sample.

<sup>5</sup>The Prevalence Study indicates a problem rate of 14 percent throughout the Air Force. This rate projects to approximately 15 percent for the treatment sample, after adjusting for the somewhat more junior composition of this group. (See Appendix A.)



NOTE: The problem rates are weighted to reflect the true proportions of ARC and local program entrants and the true active-duty versus separated proportions at followup. The rates of alcohol dependence and nondependent problems are both significantly lower at followup ( $p < .001$ , by McNemar chi-square test).

Fig. 3.1—Alcohol problem rate at admission and followup

of 82 percent during the year prior to admission. Thus, the data in Table 3.2 indicate that both groups experienced significant improvement after treatment. The results also show that the problem rate among persons remaining on active duty was significantly lower than that reported by persons who separated from the Air Force (26.9 percent versus 39.7 percent,  $p < .01$  by t-test). The lower overall rate reflects a significantly lower rate of alcohol dependence ( $p < .05$ ) and a marginally lower rate of nondependent problems among persons remaining in the Air Force. Since the two groups reported equal rates of problems prior to admission, the higher followup rate among separated personnel indicates that clients who did not improve

Table 3.2

ALCOHOL PROBLEM RATE AT FOLLOWUP FOR ACTIVE-DUTY  
AND SEPARATED PERSONNEL<sup>a</sup>

Alcohol Problem Category	Rate (%)	
	Active-Duty Personnel	Separated Personnel
Alcohol dependent	6.9	13.0
Nondependent problem	20.0	26.7
No problem reported <sup>b</sup>	73.1	60.3
(N)	(597)	(159)

<sup>a</sup>The problem rates are weighted to reflect the true proportions of ARC and local program entrants.

<sup>b</sup>The percentage of active-duty personnel who did not report problems is significantly higher than the comparable percentage for separated personnel ( $p < .01$ , by t-test). This effect represents a significant difference in the dependence rate and a marginal difference in the nondependent problem rate ( $p < .05$  and  $p < .10$ , respectively).

were more likely to leave the Air Force than those who responded to treatment.<sup>6</sup> This result is consistent with Air Force policy concerning the separation of persons who do not successfully complete the rehabilitation program.

The substantial reduction in the overall problem rate following treatment is clearly reflected in the rates assessed for the 16 types of serious impairment comprising the overall measure. These results are presented in Table 3.3, which shows the 16 rates at followup and admission for persons remaining on active duty. Without exception, the percentage of the sample reporting each problem at followup is lower than the comparable rate during the year prior to admission. For the most common problems at admission, the improvement is dramatic and, moreover, less than 10 percent of the sample reported experiencing any given problem during the followup period.<sup>7</sup>

The preceding analysis makes it clear that the sample of program entrants experienced significant improvement after treatment. Both active-duty and separated personnel showed significant reductions in the rate of serious alcohol-related problems, with the most improvement occurring among persons remaining in the Air Force. Given that the program appears to work well, two further questions should now be addressed. First, what portion of the problem population is identified for treatment? Second, is followup status related to the type of services clients receive during rehabilitation?

### REHABILITATION PENETRATION RATE

The admission results can be used in conjunction with other data to estimate the portion of alcohol abuse that is identified and treated annually. Applying the admission problem rates

<sup>6</sup>According to the survey data, the rate of alcohol-related separations was 22.9 percent for persons classified as alcohol dependent at followup, 18.8 percent for those with nondependent problems, and 5.4 percent for persons who did not report problems during the followup period.

<sup>7</sup>The followup measures of alcohol consumption, nondriving arrests, threats by one's spouse, and fights were directly comparable to those used in the Prevalence Study, which varied slightly from those used in the admission survey. The admission measures yield somewhat lower estimates for the first two problems and somewhat higher estimates for the last two.

Table 3.3

**PROBLEM RATES AT FOLLOWUP AND ADMISSION FOR  
ACTIVE-DUTY PERSONNEL<sup>a</sup>**

Problem	Percent Reporting Problem	
	Followup Survey	Admission Survey
Dependence Symptomatology	6.9	15.6
Work Impairment		
Lower performance rating	6.1	9.0
Loss of 3 working days	7.4	16.1
Physical Damage		
Illness lasting one week	1.2	2.9
Hospitalization	2.5	14.0
Visits to physician	2.2	6.1
Accident with self-injury	1.5	9.1
Accident with injury to others or property damage	3.1	9.9
Damaging consumption level	2.8	6.3
Social Disruption		
Spouse left	0.6	4.4
Spouse threatened to leave	2.6	12.5
DWI arrest	7.0	35.0
Nondriving arrest	2.6	9.2
Jailed	3.6	21.1
Fights	6.1	19.8
Official punishment	6.4	32.5

<sup>a</sup>The problem rates are weighted to reflect the true proportions of ARC and local program entrants.

in Fig. 3.1 to the overall program attendance figure in Table 2.3 yields estimates of 1308 alcohol dependent clients and 5369 nondependent problem clients treated during 1977. The Prevalence Study results suggest that the total numbers of persons with alcohol dependent and nondependent problems were 26,021 and 52,609, respectively, during this period. Thus, the penetration rate for nondependent problem cases was apparently only 10 percent, while for dependent cases it was 5 percent. These results are summarized in Table 3.4.

It should be noted that a successful program does not have to identify all problem cases in a single year. If we assume that the first-term enlisted force (which includes the majority of

Table 3.4

**REHABILITATION PENETRATION RATE, 1977**

Admission Status	Number of Cases		Penetration Rate (%)
	Entering Rehabilitation	In Population	
Alcohol dependent	1308	26,021	5.0
Nondependent problem	5369	52,609	10.2

problem cases) replaces itself only every three to four years and that treated personnel have relatively constant remission rates, then an annual penetration rate between 30 and 40 percent could, over a period of several years, identify most of the abusers in the total population. In spite of this caveat, it is clear that the current rehabilitation program identifies only a small portion of the persons with alcohol problems in the Air Force population. Moreover, the penetration rate seems slightly lower for persons with alcohol dependence than for those with nondependent problems; ideally, identification of dependent persons should be higher, given their greater impairment and, thus, their disproportionately greater share of abuse costs.

Interestingly, identified nondependent problem cases are skewed toward persons with alcohol-related incidents involving the official justice system (e.g., DWIs, Article 15s), which may aid in identification. On the other hand, alcohol dependent cases are more frequently marked by missed duty and medical problems. This suggests that supervisors and medical staff could be more heavily involved in the identification process than they are at present.

## IMPACT OF TYPE OF TREATMENT ON FOLLOWUP STATUS

The penetration results give added importance to outcome comparisons among the treatment modes. This is because increasing identifications may require the expenditure of funds now devoted to treatment per se, and it would certainly impose heavier caseloads—and costs—on the rehabilitation components. Thus, we need to examine whether the less intensive treatments, which can accommodate a greater number of clients within fixed budgetary resources, are as effective as the more intensive interventions. We begin by comparing the outcomes of the different modalities. In Chapter 4, we consider the cost implications of these results.

### Comparisons Among Primary Treatment Modes

The primary components of the Air Force Alcohol Rehabilitation Program were discussed at length in Chapter 2. Here, we briefly summarize that discussion. The program consists of three major types of treatment, two of which are received in local rehabilitation programs:

1. *The Alcohol Awareness Seminar*—the least intensive intervention, consisting of 8 hours of discussions that are led by Social Actions personnel and are designed to promote responsible alcohol-related behavior and attitudes.
2. *Outpatient Counseling*—a more intensive intervention, also received at base level, consisting primarily of group and/or individual counseling sessions.
3. *Hospitalization in Alcohol Rehabilitation Centers*—the most intensive intervention, typically requiring a 28-day period of centralized inpatient treatment and used primarily for persons who are highly impaired at admission.

We noted earlier that although the three components are conceptually distinct, the services received by most clients are hierarchical in nature; the vast majority of outpatient counseling and inpatient clients attend the awareness seminar, and, moreover, nearly all inpatients also attend outpatient sessions at the local level. Therefore, in the analyses presented in this section, we have classified respondents according to the most intensive type of intervention they received. Those classified as "inpatient" were hospitalized in Air Force Alcohol Rehabilitation Centers. Clients classified as "outpatient" received group and/or individual counseling sessions in local rehabilitation programs, but were not hospitalized in ARCs. Finally, clients

classified as "awareness seminar" attended the seminar in local rehabilitation, but did not receive the other services.<sup>8</sup>

In the effectiveness comparisons that follow, it is important to bear in mind the services that characterize each mode of treatment, as discussed in Chapter 2. In particular, we note that the average outpatient client received *numerous* counseling sessions at Social Actions over a period of several months. We note, moreover, that ARC clients also attended numerous outpatient counseling sessions at the local level. Thus, in comparing the two rehabilitation modes, we are asking in essence whether the inpatient services received during a client's two-to four-week stay at an ARC—which also relied heavily on counseling and discussion programs—added materially to the effectiveness of several months of outpatient counseling at Social Actions.

Our first step in comparing the effectiveness of the three treatment modes was to examine whether persons with more severe problems at admission were assigned to more intensive modes of intervention. This is the assignment procedure one would expect in a natural field study, and the results presented in Table 3.5 clearly indicate that this was the case.<sup>9</sup> Among the clients most severely impaired at admission—those we have classified as alcohol dependent—there were two major interventions: hospitalization in Alcohol Rehabilitation Centers and assignment to counseling services at the local level. As shown in Table 3.5, 42.4 percent of the dependent clients received inpatient treatment (coupled with outpatient counseling), and a comparable number—46.1 percent—received outpatient counseling without hospitalization. In contrast, as one would expect, just a handful of these highly impaired individuals attended only the awareness seminar (7.3 percent). In such cases, it is possible that the extent of the client's problem was not apparent to the treatment staff or that further rehabilitation was not possible (e.g., the client refused additional services).

Table 3.5

ASSIGNMENT TO TREATMENT MODES<sup>a</sup>

Admission Status	Percent Assigned to Treatment Modes		
	Inpatient	Outpatient	Awareness Seminar
Alcohol dependent	42.4	46.1	7.3
Nondependent problem	11.1	62.2	23.4

<sup>a</sup>The assignment rates are weighted to reflect the true proportions of inpatient and local program entrants. Minor components of the local rehabilitation program are not shown; therefore, the percentages sum to just under 100 percent.

The results for persons less impaired at admission—those we have classified in the non-dependent problem group—clearly evidence a different pattern of assignment to treatment. For these clients, the primary intervention mode was outpatient counseling, with 62.2 percent reporting this treatment. Moreover, 23.4 percent attended only the awareness seminar, while just 11.1 percent received inpatient care. This last group presumably includes individuals whose home, work, or social environment made centralized treatment desirable. In sum, in comparison with the more seriously impaired dependent group, nondependent clients were

<sup>8</sup>As discussed in Chapter 2, an outpatient counseling session was routinely given to persons receiving the awareness seminar in some programs. Therefore, we required a minimum of two counseling sessions for inclusion in the "outpatient" group.

<sup>9</sup>Because we are interested in comparing the *remission rates* shown by persons receiving the different modes of treatment, the results for the small group of individuals who did not report problems at admission are not presented.

more likely to be assigned to the outpatient counseling and awareness seminar modes, but were less likely to receive inpatient treatment ( $p < .001$  in all cases, by t-test).

The assignment of treatment services according to initial problem severity is quite logical and, as noted, is the pattern one might expect to see in a natural field setting. However, because the persons receiving more intensive services tend to have higher levels of impairment at admission, it poses problems for analyses comparing the effectiveness of the treatment modes that must be dealt with. In the analyses that follow, we controlled for differences in impairment in two ways. First, we compared the treatment modalities *separately* for the dependent and nondependent groups. This procedure *directly controls* for differences on the most important discriminator of problem severity at admission. Second, we coupled this procedure with a statistical adjustment, to control for any residual differences *within* the dependent and nondependent groups in the admission characteristics of persons assigned to the three modes of treatment. The adjustment controlled for possible differences on a variety of measures assessing impairment during the year prior to admission, important background characteristics, and social environment.<sup>10</sup> It is our belief that these procedures provide an effective control for differences in admission status among the persons receiving different modes of treatment in our study.

The differences in admission characteristics among clients assigned to the three treatment modes and the relative importance of the two control procedures are illustrated by Table 3.6, which shows the number of workdays missed because of alcohol abuse in the 12 months prior to admission according to treatment assignment and admission status. The bottom panel of the table indicates that clients assigned to inpatient treatment missed three times as much work as clients assigned to the outpatient counseling mode, and eight times as much work as clients assigned to the awareness seminar. However, these differences are largely attributable to the fact that alcohol dependent persons constitute a much larger proportion of the ARC clients than of the clients receiving less intensive interventions. This is reflected by the data in the upper panel, which indicate that the dependent-nondependent problem distinction accounts for most of the variation in the number of workdays missed. Within each problem group, the clients assigned to intensive interventions had missed more workdays than the clients receiving less intensive treatments; however, the differences in missed days were small compared with the differences *between* the two problem groups. Thus, by comparing treatment mode effectiveness *within* problem groups, we eliminated most of the variation in admission problem severity among clients assigned to different interventions. The smaller residual differences within problem groups were controlled by the statistical adjustment procedure. Details of the procedure are given in Appendix F.

The remission rates for clients receiving the three modes of treatment are shown in Table 3.7, which presents the rates separately for the dependent and nondependent groups. The rates have been weighted to reflect the proper proportions of active-duty and separated personnel at followup. In the upper panel of the table, the percentage of respondents reporting no serious problems during the followup assessment period is shown for each cell prior to adjustment for differences in admission characteristics. The lower panel shows the corresponding rates after adjustment. Because very few dependent clients are assigned to the awareness seminar alone, the means for this cell are not shown.

Comparing the results in the upper and lower panels of Table 3.7, it is clear that the primary impact of the adjustment is to improve the outcomes of the dependent group relative to those of clients with nondependent problems at admission. This result for the overall

<sup>10</sup>The adjustment used a multiple regression procedure to remove the effect of differences in initial problem severity and background characteristics on the followup problem rates computed for persons receiving different modes of treatment. The adjustment variables are discussed in Appendix F, which includes the regression coefficients obtained for these variables in the analyses described in the remainder of this chapter. Because the coefficients varied slightly for the different analyses, the reader will note small fluctuations in the adjusted percentages reported.

Table 3.6

**LOST WORKDAYS BY ADMISSION STATUS  
AND TREATMENT MODE**

(Workdays Lost in 12 Months Before Admission)

Admission Status	Number of Lost Workdays		
	Inpatient Mode	Outpatient Mode	Awareness Seminar Mode
Alcohol dependent (N)	8.9 (182)	7.8 (43)	— (7)
Nondependent problem (N)	3.1 (228)	1.0 (273)	0.5 (101)
Total	5.7	1.9	0.7

Table 3.7

**REMISSION RATE BY TREATMENT MODE<sup>a</sup>**

(Percent Reporting No Serious Problems at Followup)

Analysis	Admission Status	Remission Rate		
		Inpatient Mode	Outpatient Mode	Awareness Seminar Mode
Unadjusted	Alcohol dependent (N)	64.6 (143)	68.6 (33)	— (5)
	Nondependent problem (N)	61.0 (170)	71.7 (213)	64.3 (68)
Adjusted <sup>b</sup>	Alcohol dependent (N)	72.3 (143)	76.6 (33)	— (5)
	Nondependent problem (N)	61.9 (170)	72.2 (213)	66.1 (68)

<sup>a</sup>The rates have been weighted to reflect the true proportions of active-duty and separated personnel. The rates in the lower panel are statistically adjusted for differences in impairment and background characteristics at admission.

<sup>b</sup>Significance tests, performed on the adjusted rates, indicate that the inpatient versus outpatient difference for the dependent group was not significant. For persons with non-dependent problems at admission, the rate for inpatient treatment was not significantly different from the combined results for the two local rehabilitation modes. In turn, the rates for the two local modes were also statistically equivalent.

problem measure is consistent with the point we noted above for missed workdays; namely, the dependent-nondependent distinction captures most of the variance in severity of impairment at admission among the program entrants in our study. In contrast, the data indicate that, within the dependent and nondependent groups, the differences in remission rates among the three treatment modes are affected very little by the adjustment. In other words, the results suggest that the variation in initial impairment among the persons in each group who received different treatments was too small to have an appreciable impact on the problem rates reported at followup.



The central feature of Table 3.7 is that the remission rates for the less intensive treatment modes compare very well with those reported for the more intensive interventions. Looking first at the adjusted results for the individuals most impaired at admission—those we have classified as alcohol dependent—we find that the remission rate for outpatient counseling compares favorably with the rate reported for the inpatient mode. In both cases, the remission rate exceeds 70 percent after adjustment, and the two rates are statistically equivalent. Looking next at the adjusted results for persons less impaired at admission, we find that the remission rate for clients who were rehabilitated at the local level compares very well with the rate reported for the inpatient mode. Moreover, the two local rehabilitation modes yield comparable results. Neither of these comparisons reaches statistical significance; the remission rate for the awareness seminar mode (66.1 percent) does not differ statistically from the rate for the outpatient counseling mode (72.2 percent), nor do the combined results for these modes differ from the rate reported by nondependent clients who received inpatient treatment (61.9 percent).<sup>11</sup>

The results in Table 3.7 include data provided by both active-duty and separated personnel. In Table 3.8, we present the adjusted remission rates for each group. The results for persons who remained in the Air Force throughout the study period are shown in the upper panel of the table. The results for separated personnel are shown in the lower panel; because of small cell sizes, the means for the dependent-outpatient and nondependent-awareness groups have been omitted for separated personnel.

Table 3.8

REMISSION RATES FOR ACTIVE-DUTY AND SEPARATED PERSONNEL<sup>a</sup>  
(In Percent)

Type of Personnel	Admission Status	Remission Rate (%)		
		Inpatient Mode	Outpatient Mode	Awareness Seminar Mode
Active-duty <sup>b</sup>	Alcohol dependent (N)	77.4 (106)	71.4 (28)	— (3)
	Nondependent problem (N)	74.2 (135)	72.1 (171)	74.0 (57)
Separated <sup>c</sup>	Alcohol dependent (N)	63.8 (37)	— (5)	— (2)
	Nondependent problem (N)	34.0 (35)	72.5 (42)	— (11)

<sup>a</sup>The remission rates have been adjusted for differences in admission characteristics.

<sup>b</sup>There are no significant differences in remission rates for either the dependent or nondependent group.

<sup>c</sup>The remission rates for the nondependent group are significantly different ( $p < .001$ , by t-test).

The data for active-duty personnel clearly reflect the same pattern of results as those in the preceding table. For the alcohol dependent group, the remission rate for persons receiving outpatient counseling compares very well with the rate reported for the inpatient mode (71.4

<sup>11</sup>The statistical analysis reported here uses orthogonal comparisons to assess treatment mode differences. This technique allows the differences between the means of  $k$  treatment conditions to be contrasted in  $k - 1$  independent tests.

percent versus 77.4 percent, respectively). Among clients less impaired at admission, the remission rate for local rehabilitation is comparable to the inpatient rate, and the rates for the two local modes are also statistically equivalent. Indeed, the remission rates for the three nondependent groups are virtually identical.

The results reported by persons who left the Air Force are similar to those reported by active-duty personnel for two of the three rates shown in the lower panel of the table. The exception is that nondependent separated personnel who received inpatient treatment experienced significantly less remission at followup than those receiving outpatient counseling alone ( $p < .001$ , by t-test). The explanation for this finding is not clear. However, it may reflect the fact that, among persons with low levels of dependence symptoms, the presence of multiple nondependent problems at admission increases the likelihood of assignment to inpatient treatment. If some of these problems—e.g., impairment of duty performance—continued after treatment, such persons would meet the criteria for alcohol-related separation from the Air Force.

### Other Treatment Distinctions

In addition to the comparison for the three basic treatment modes, we compared remission rates at followup for several more detailed categorizations of the services received from the rehabilitation program by our respondents. The results of these analyses were consistent with those discussed earlier, suggesting that the services compared were equally effective. In this section, we present two of the analyses: (1) comparisons of large and small amounts of inpatient and outpatient treatment; and (2) comparisons of individual versus group outpatient counseling services. In the interest of simplicity, and because of the particular importance of the results for persons still in the Air Force at followup, the analyses presented describe the data provided by persons who remained on active duty throughout the study period.<sup>12</sup>

Table 3.9 shows the adjusted remission rates for dependent and nondependent clients according to the length of inpatient treatment received (28-day versus 14-day program) and the number of outpatient counseling sessions attended (11 or more versus 10 or fewer). We have also distinguished the results of the two 14-day inpatient programs because of an apparent difference in remission rates for dependent clients (approximately 25 percent). This difference is not statistically significant, but its magnitude raises questions about the efficacy of program "B" for dependent persons; unfortunately, the cell size is too small to provide a reliable estimate of the true remission rate for this group.

The results in Table 3.9 conform to the pattern described in the preceding section: the remission rates for the less intensive treatment modes are comparable to the rates reported for the more intensive interventions. This is true both for comparisons between the 28-day and 14-day inpatient programs and for comparisons between clients receiving large versus small numbers of outpatient counseling sessions at the local level. Neither of the two comparisons yields statistically significant results for either the dependent or nondependent group.<sup>13</sup>

We next compare the remission rate for persons receiving individual counseling services in local rehabilitation programs with the rate reported for group counseling services. For the purpose of this comparison, we divided the clients assigned to the outpatient mode into three major groups, according to the number of individual and group counseling sessions attended:

<sup>12</sup>For the same reasons, all subsequent analyses discussed in this chapter were performed separately for active-duty personnel and are presented in this form unless otherwise noted.

<sup>13</sup>The results of the two 14-day programs did not differ significantly for either dependent or nondependent clients. The rates for these programs were combined in the orthogonal comparisons made between the 14-day and 28-day inpatient modes, and were weighted equally.

Table 3.9

ACTIVE-DUTY REMISSION RATE BY AMOUNT OF TREATMENT<sup>a</sup>

Admission Status	Remission Rate (%)				
	Inpatient Mode		Outpatient Mode		
	28-Day	14-Day A      B	More Than 10 Sessions	10 or Less Sessions	
Alcohol dependent (N)	81.3 (78)	75.4 (20)	— (6)	74.1 (18)	73.2 (10)
Nondependent problem (N)	76.3 (91)	72.3 (25)	76.2 (16)	70.6 (97)	79.9 (74)

<sup>a</sup>The remission rates have been adjusted for differences in admission characteristics. Statistical comparisons of the remission rates were made between the two outpatient modes, the two 14-day inpatient modes, and the 28-day versus 14-day inpatient modes, for both the dependent and nondependent problem groups. None of the six orthogonal comparisons yielded statistically significant results.

(1) persons attending more than one session of each type; (2) persons attending more than one individual session but at most one group session; and (3) persons attending more than one group session but at most one individual session.<sup>14</sup> The results for the three groups are presented in Table 3.10. The data shown are the remission rates for active-duty personnel after adjustment for differences at admission. Because of small cell sizes for the dependent-outpatient groups, the results for clients with dependent and nondependent problems at admission have been combined in Table 3.10, and the analyses described below were performed on the pooled data for these individuals.

The results in Table 3.10 suggest that the three outpatient modalities were about equally effective. In particular, statistical comparisons show that group and individual counseling services yielded comparable outcomes, and provide no evidence that multiple sessions of both kinds enhanced the rate of remission. While the comparison between this last mode and the first two (combined) does not reach statistical significance, the persons receiving multiple sessions of both kinds appear to report somewhat less improvement. This result could reflect the assignment of additional counseling services to some individuals who fail to improve after initial treatment.

## SENSITIVITY AND VALIDITY ANALYSES

The results presented in the preceding sections indicate that the admission sample experienced substantial improvement after treatment and that the remission rates for persons receiving different modes of rehabilitation were comparable. In this section, we present data bearing on the sensitivity of these results to the use of different problem measures. At the conclusion of the section, we analyze the validity of the self-reports obtained from our survey respondents as compared with official records.

<sup>14</sup>Only five individuals attended one session of each type; therefore, the results for these persons are not presented.

Table 3.10

ACTIVE-DUTY REMISSION RATE FOR INDIVIDUAL  
AND GROUP OUTPATIENT SERVICES<sup>a</sup>  
(In Percent)

Item	Both Types	Outpatient Mode	
		Individual Counseling	Group Counseling
Remission rate <sup>b</sup>	69.9	80.7	84.5
(N)	(69)	(48)	(73)

<sup>a</sup>The remission rates have been adjusted for differences in admission characteristics. The outpatient groups were defined according to whether the respondent received two or more group sessions, two or more individual sessions, or at least two sessions of both types.

<sup>b</sup>The remission rates for the individual and group counseling cells are statistically equivalent, and the combined results for these cells do not differ significantly from the remission rate for persons who received both types of counseling.

### Changes in Alcohol Problem Measures

In addition to the analyses made for the overall problem measure, we compared the outcomes of the three basic treatment modes on numerous indices of alcohol-related impairment at followup. These included measures of (1) total work time lost; (2) days of alcohol-related hospitalization; (3) number of warning incidents (e.g., being told by a doctor to reduce one's consumption of alcohol); (4) number of symptoms; and (5) the total number of nondependent problems (of 15) experienced by the respondent. Without exception, the results for these impairment measures were consistent with the results presented for the overall problem measure in the preceding section; namely, at followup, persons who had received the less intensive modes of treatment showed remission levels that compared favorably with those reported for the more intensive interventions.

We also analyzed several measures of alcohol consumption. The results of these analyses were mixed; however, they provide some evidence that the inpatient-local rehabilitation distinction may have had at least a marginal impact on alcohol consumption patterns, if not on the rates of serious alcohol-related problems.

The results for two of the consumption measures—abstinence and mean consumption for nonabstainers—are presented in Table 3.11. In the upper panel of the table, the percentage of clients that reported abstaining from drinking during the followup period is shown for the dependent and nondependent groups, according to the mode of treatment received. In both groups, clients receiving inpatient treatment reported a higher abstention rate than those who were not hospitalized; for the nondependent group, this difference reached statistical significance ( $p < .01$ , by t-test). The abstention rates for the two local rehabilitation modes were statistically equivalent.

The mean alcohol consumption of persons who did not abstain from drinking during the followup period is shown in the lower panel of Table 3.11, in terms of ounces of ethanol (absolute alcohol) per day. The consumption figures reflect a somewhat different pattern than the abstention results. For persons with nondependent problems at admission, the mode of treatment made little difference in alcohol consumption at followup. Among persons with higher levels of impairment at admission, clients receiving inpatient treatment reported significantly lower consumption at followup than those who were not hospitalized (0.7 versus 2.0 ounces of ethanol per day, respectively,  $p < .01$ , by t-test).

Table 3.11

ACTIVE-DUTY CONSUMPTION PATTERNS AT FOLLOWUP  
BY TREATMENT MODE<sup>a</sup>

Admission Status	Inpatient Mode	Outpatient Mode	Awareness Seminar Mode
	Percent Abstaining <sup>b</sup>		
Alcohol dependent (N)	24.2 (101)	15.6 (28)	— (3)
Nondependent problem (N)	18.5 (130)	9.2 (167)	1.8 (54)
Mean Daily Consumption Among Drinkers (oz.) <sup>c</sup>			
Alcohol dependent (N)	0.7 (74)	2.0 (23)	— (3)
Nondependent problem (N)	1.3 (101)	1.2 (149)	1.6 (53)

<sup>a</sup>The results have been adjusted for differences in admission characteristics.

<sup>b</sup>The abstention rates for the dependent groups are statistically equivalent. For persons with nondependent problems, the rate for the inpatient mode is significantly higher than the combined rate for the other two modes ( $p < .01$ , by t-test). The rates for the two local rehabilitation modes do not differ significantly.

<sup>c</sup>The consumption data represent ounces of ethanol (absolute alcohol). The inpatient and outpatient means are statistically different for the dependent group ( $p < .01$ , by t-test). The three nondependent means are statistically equivalent. The tests were performed on the transformed variable:  $\ln(1 + x)$ .

In sum, while the foregoing data provide some marginal evidence of differences in alcohol consumption patterns among persons assigned to different modes of treatment, the results for the several *impairment* indices were consistent with those found for the overall measure. Namely, remission rates at followup were highly comparable for the three modes of intervention.

### Risk of Future Problems Among Clients in Remission

The preceding analyses rely primarily on our measures of serious problems. In the analysis presented next, we combine the results for the three treatment modes, and examine evidence concerning less serious forms of impairment that may have been experienced by active-duty personnel who did *not* report the 16 problems constituting our overall measure during the followup period. Our particular purpose is to identify the number of such individuals that experienced a level of impairment suggesting a substantial risk of serious problems in the near term. Thus, the analysis assesses the sensitivity of our problem definitions as well as risk, because it identifies persons whose problems during the followup period were less serious than those included in the overall measure, but were sufficient to cause concern about future relapse.

We noted earlier that nearly all the respondents who were classified as alcohol dependent

also experienced serious nondependent problems. Thus, it is clear that the risk of experiencing such problems increased substantially as the number of dependence symptoms increased. The implication for the present analysis is that persons who did not report serious nondependent problems at followup should be distinguished according to the number of symptoms they experienced after treatment.

Although serious nondependent problems were almost universal among persons classified as alcohol dependent, the converse was not true; many respondents who experienced nondependent problems did not report high levels of alcohol dependence symptoms. Therefore, it is also clear that the analysis should include a second posttreatment risk factor, which is known to be related to the likelihood of experiencing serious nondependent problems but is defined independently of symptomatology. Warnings from other people about one's drinking represent such a factor. The receipt of warnings from a policeman, doctor, co-worker, or spouse was shown to be a highly significant predictor of nondependent problems in the Prevalence Study (Polich and Orvis, 1979). Such incidents are not necessarily serious in themselves; however, they appear to reflect behaviors that are closely related to those causing serious problems and that, if increased in intensity or frequency, could result in the occurrence of such problems in the near term. For example, compare a warning from a policeman with an actual arrest, being told to reduce drinking by one's spouse with a threat to leave because of drinking, and so forth.

As suggested by the foregoing discussion, we began our analysis by forming a scale assessing jointly the number of warning incidents and dependence symptoms reported by the respondent at followup. We then calculated the percentage of respondents that experienced serious nondependent problems among those reporting each level of warnings and symptoms specified by the scale (i.e., the risk of serious problems associated with the specified level of warnings and symptoms). These results are summarized in Table 3.12. The first two columns of the table show the numbers of warnings and symptoms reported by the respondent. The third column shows the risk of serious nondependent problems at each level of warnings and symptoms. The fourth column shows the number of respondents classified at each level.<sup>15</sup>

The data in the first row of Table 3.12 clearly indicate that persons reporting no warning incidents or dependence symptoms had only a minimal risk of experiencing serious problems. Among such individuals, the problem rate was only 8.8 percent. In the second row, we see that unwarned persons who experienced one or two dependence symptoms had a somewhat greater risk of problems. However, the absolute risk of serious problems for these individuals was still relatively low (18.1 percent).

The results shown in the six remaining rows of Table 3.12 indicate that persons who were warned about their drinking or, among those not warned, who reported three or more dependence symptoms had a substantial risk of serious problems. The proportion of persons who experienced such problems ranged from approximately one-third among individuals reporting three or more symptoms and no warnings to more than two-thirds among individuals reporting 12 or more symptoms and at least one warning.

To review briefly, if we use the number of warning incidents and dependence symptoms reported in the followup survey to index risk, the data suggest that persons who were warned about their drinking or who experienced more than two symptoms engaged in behavior leading to a high risk of serious alcohol-related problems. Of course, many persons who reported warnings or symptoms did not actually experience serious problems during the followup period. However, if such individuals continue their recent patterns of behavior, the foregoing analysis implies that they may have a substantial risk of experiencing serious problems in the near term.

<sup>15</sup>The category of 1-2 symptoms represents the minimum nonzero symptom level assessed by the questionnaire, and is limited to persons reporting an occurrence of one of the four types of symptoms used to assess dependence. Persons reporting occurrences of more than one type of symptom are classified in higher categories.

Table 3.12

**RISK OF PROBLEMS AT FOLLOWUP FOR  
ACTIVE-DUTY PERSONNEL<sup>a</sup>**  
(In Percent)

Number of Warning Incidents	Number of Dependence Symptoms	Rate of Serious Problems	(N)	
None	0	8.8	(310)	} High Risk
	1-2	18.1	(72)	
	3-11	32.8	(37)	
	12-47	36.4	(21)	
One or More	0	47.2	(33)	
	1-2	48.0	(30)	
	3-11	58.6	(39)	
	12-47	69.6	(12)	

<sup>a</sup>The percentages are weighted to reflect the true proportion of inpatient and local program entrants. The numbers of cases are unweighted. The results for persons reporting 48 or more symptoms at followup have been omitted, since all such persons are considered alcohol dependent by definition.

These results are summarized in Table 3.13, which integrates the findings of the risk analysis with the alcohol problem rates established by our overall measure. The data in the upper portion of the table indicate that 26.9 percent of the rehabilitation program entrants who remained on active duty experienced significant alcohol-related problems during the followup period. In contrast, the data in the lower portion indicate that the majority of active-duty clients—73.1 percent—did not report serious alcohol problems at followup. Among the latter group, a small number—14.7 percent—appear to have recently engaged in behavior that, if continued, could place them at considerable risk of experiencing serious problems. In comparison, the remaining 58.4 percent appear to have only a small risk of experiencing serious problems in the near term.

Table 3.13

**SUMMARY OF ALCOHOL PROBLEM AND  
RISK CLASSIFICATIONS AT FOLLOWUP FOR  
ACTIVE-DUTY PERSONNEL<sup>a</sup>**  
(In Percent)

<i>Problem Reported</i>		26.9
Alcohol dependent	6.9	
Nondependent problem	20.0	
<i>No Problem Reported</i>		73.1
At high risk	14.7	
At low risk	58.4	

<sup>a</sup>The percentages shown are weighted to reflect the true proportions of inpatient and local program entrants.

### Validity Analysis

The foregoing results are complete in themselves. They can be given additional meaning, however, by comparisons with other data. Prominent among such comparisons are analyses of validity. Recent alcohol research strongly suggests that self-reports of problems similar to those comprising our overall measure compare quite well with other indices of the same behaviors. Comparisons with both official records and collateral information provide little evidence that the occurrence of such problems is underreported; to the extent that differences exist, self-reports appear to be more complete (Sobell and Sobell, 1978; Polich et al., 1981). Moreover, a validity analysis of the problem rates obtained by our own overall measure, for the Air Force population in particular, yielded similar results (Polich and Orvis, 1979). Nonetheless, because rehabilitation program clients comprise a special subpopulation of Air Force personnel, we conducted a separate validity analysis for the persons in our study. The results of this analysis are discussed below.

Using information obtained from base personnel at the 20 study locations and official Air Force records (UAR), we constructed a variety of measures to compare with the self-reports provided by our survey respondents. Unfortunately, in the course of this procedure it became clear that in many instances the relevant official record information was not sufficiently complete. For example, although evidence of punishment or confinement could be discerned from numerous variables in the UAR, the UAR variables did not describe these incidents comprehensively. However, there is no issue of comprehensiveness for three of the comparisons made between official information and self-reports: (1) estimates of the rate of DWI arrests; (2) estimates of the alcohol-related separation rate; and (3) estimates of the most recent performance rating (APR) score received by the respondents. The results of these comparisons are shown in Table 3.14.

As noted in Chapter 2, base personnel at the 20 study locations completed a "Treatment Disposition Form" for each client participating in the evaluation study. One of the questions

Table 3.14

#### COMPARISON OF OFFICIAL RECORDS WITH SELF-REPORTS<sup>a</sup>

Measure	Data Source	
	Official Records	Self- Report
DWI Arrest Rate (percent of admission sample)	35.5	33.3
Alcohol-Related Separation Rate (percent of admission sample)	10.6	10.5
Most Recent Performance Rating (mean rating)		
Admission	8.5	8.6
Followup	8.4	8.6

<sup>a</sup>The numbers shown are weighted to reflect the true proportions of inpatient and local program entrants. The arrest rate comparison was made for the full admission sample, using official information provided by base staff members. The separation rate and performance rating comparisons were made for enlisted personnel, using UAR data for 30 September 1977-30 September 1979.



on this form concerned the event that led to the client's identification for treatment. The data provided by staff members in response to this question indicate that DWI arrests accounted for 35.5 percent of the identifications among study participants. The rate is compared with the DWI arrest rate reported by the respondents to the admission survey (33.3 percent) in the upper panel of Table 3.14. Clearly, the two rates are in close agreement.<sup>16</sup>

To estimate the alcohol-related separation rate among study participants from official records, we first drew a special random sample of approximately 2500 enlisted personnel from the 30 September 1977 UAR. By comparing these records with the records in the 30 September 1979 UAR, we determined that the separation rate for enlisted personnel was 25.8 percent over the two-year period. This projects to a rate of 26.2 percent for our treatment sample, after adjusting for its somewhat more junior composition.<sup>17</sup> Using UAR data again, we next determined that the actual separation rate for our enlisted study participants was 36.8 percent during this period. The difference between these rates—10.6 percent—estimates the alcohol-related separation rate for our enlisted participants over the two-year period, and is shown in the second row of Table 3.14 under "Official Records."

To estimate the alcohol-related separation rate from self-reports, we simply multiplied the overall separation rate for the two-year period (36.8 percent) by the proportion of alcohol-related separations reported in the followup survey (question 130; 28.6 percent of all separations by study participants listed in the 1977 UAR). The resulting figure—10.5 percent—is shown in the second row of Table 3.14 under "Self-Report." Comparing the self-report estimate with the official estimate of 10.6 percent, it is clear that there is no evidence that alcohol-related separations were underreported by our survey sample.

The lower portion of Table 3.14 compares the most recent APR evaluation scores reported by our survey respondents with the UAR record of these evaluations. The performance ratings are contrasted for two time periods: (1) the score reported for the last APR prior to admission is compared with the most recent evaluation shown in the 30 September 1977 UAR; and (2) the last rating reported by the respondent in the followup survey is compared with the most recent evaluation according to the 30 September 1979 UAR. The data in the lower portion clearly indicate that the official-record and self-report estimates of mean APR rating were virtually identical at both time periods.<sup>18</sup> These results are consistent with the results of the comparisons discussed above; namely, the measures provide no evidence of bias in the self-reports of our survey respondents.

## SUMMARY

Our analysis of participants in the alcohol rehabilitation program indicates that nearly all the clients experienced serious alcohol-related problems during the 12 months prior to admission. According to our overall measure, the rate of alcohol dependence among clients was more than three times as great as that found in the general Air Force population, and most of them had multiple indications of recent adverse consequences resulting from their drinking.

<sup>16</sup>The DWI arrest rate calculated from official records was computed for the 97 percent of study participants for whom the event leading to identification for treatment was known. The aggregate DWI means shown in Table 3.14 reflect an agreement rate of 87.0 percent at the individual level.

<sup>17</sup>As discussed in Appendix A, the proportion of personnel in grades E1-E4 was about 14 percent higher among our program entrants than for the general Air Force population. The fact that these grades are involved in the majority of separations explains the slight increase in the adjusted rate.

<sup>18</sup>For the minority of respondents who completed the followup survey in 1978, the followup comparison was made with the 30 September 1978 UAR. In both cases, the followup comparison was made for enlisted personnel who remained on active duty through 30 September of the year in which they were resurveyed. The aggregate means shown in Table 3.14 reflect agreement rates of 80.1 percent and 75.2 percent between the official record and self-report values of each respondent's most recent APR, at admission and followup, respectively.

The results indicate that clients experienced substantial improvement after treatment. Although the proportion of respondents who continued to report problems was about twice as high as that found in the Air Force as a whole, a marked reduction in the number of persons experiencing serious problems of more than 50 percentage points occurred following rehabilitation. Significant improvement was shown both by separated personnel and, especially, by persons who remained on active duty during the study period.

Although the program seems effective in reducing abuse, it apparently reaches less than 10 percent of the persons who experience serious alcohol problems in a given year. Moreover, the penetration rate appears to be lower for persons with alcohol dependence than for those with nondependent problems. This runs counter to the desirable direction, given the greater impairment of the former group.

Comparisons of the effectiveness of the three primary treatment modes comprising the rehabilitation program indicate that the less intensive treatments compare very well with the more intensive interventions. Among clients highly impaired at admission, the remission rate for persons receiving the outpatient counseling mode in local rehabilitation was comparable to that for persons who received inpatient treatment. Among clients with nondependent problems at admission, individuals assigned to local rehabilitation programs and inpatient treatment programs showed comparable remission rates; moreover, the results for the two local rehabilitation modes suggest that the Alcohol Awareness Seminar was equal in effectiveness to outpatient counseling.

Analyses of other treatment distinctions and problem measures yielded similar results. Comparisons of the efficacy of 28-day versus 14-day inpatient programs, of large versus small numbers of outpatient counseling sessions, and of individual versus group counseling services suggest that these treatment modalities were all about equally effective. Sensitivity analyses indicate that the use of other problem measures to compare the outcomes of the primary treatment modes has little impact on the finding of equal effectiveness. Finally, our comparisons of official records with the self-reports provided by the survey respondents support the validity of the study results.

In interpreting these findings, it is important to remember that our study evaluated the rehabilitation program as it operates in the field, rather than by conducting a randomized experiment. Thus, issues such as the contribution of natural remission to the improvement shown following rehabilitation and the attainment of truly definitive results concerning possible treatment mode differences are beyond the scope of this research. Such data await the resolution of the numerous ethical and logistical complexities attendant to the use of randomized treatment procedures for persons with alcohol problems. While the results, therefore, should not be regarded as conclusive, they are certainly consistent with those of numerous civilian population studies that have compared the effectiveness of various treatment interventions (Polich et al., 1981; Edwards et al., 1977).

## Chapter 4

### COST ANALYSIS OF THE REHABILITATION PROGRAM

The results presented thus far suggest that alcohol program clients experience substantial improvement after treatment and that, for persons with comparable impairment at admission, the major rehabilitation interventions are equally effective. We now use these results in conjunction with other data to examine the efficiency of rehabilitation expenditures. In raising the issue of efficiency, we introduce the factor of cost, acknowledge that some forms of rehabilitation are more expensive than others, and address the cost-effectiveness of different treatments.

Two specific objectives guide this cost analysis. First, we wish to estimate the economic cost of alcohol abuse in the form of lost production, medical expenses, accidents, and the like. This information not only serves as a necessary first step in a cost-effectiveness analysis, but is valuable in its own right for assessing the total impact of alcohol abuse on the Air Force. Second, the cost of alcohol abuse will be combined with the treatment results in Chapter 3 to estimate the potential cost savings associated with each treatment method. The cost savings due to rehabilitation will be compared with treatment cost to evaluate the cost-effectiveness of each treatment mode, as well as of the rehabilitation program as a whole.

The purpose of the cost-effectiveness analysis is not to discover whether the Air Force alcohol program is justified by the reduced cost of alcohol abuse, i.e., whether it "pays" for itself by savings from rehabilitated personnel. Although the alcohol program may well be cost-effective in these terms, alcohol rehabilitation is not justified solely on economic grounds. The Air Force offers alcohol rehabilitation not only to reduce economic losses, but also to alleviate the human suffering and social disruption that accompanies alcohol abuse.

The purpose of the cost-effectiveness analysis is to help the Air Force identify those treatment methods that are most efficient for a given level of impairment. Since only about 10 percent of alcohol abusers are now identified and referred for rehabilitation, it is possible that the Air Force may want to increase the identification rate. If so, given the increasingly tight budgetary constraints that are likely to operate during the 1980s, the Air Force may wish to emphasize those rehabilitation methods shown to be both effective and efficient.

#### COST OF ALCOHOL ABUSE

Determining the cost of alcohol abuse requires several steps. First, we must identify those types of alcohol problems that have a direct and measurable economic impact. We will group these into several cost-factor categories. Second, we must estimate the cost of each factor, e.g., the cost of a lost workday, a hospital day, and so forth. Finally, we will compute the total cost of abuse for the Air Force by category and then break down the total cost attributable to each alcohol problem group (dependent versus nondependent).

#### Cost Factors

Our classification of alcohol problems with economic impact parallels that used by the National Institute on Alcohol Abuse and Alcoholism (Berry et al., 1977; DHEW, 1974). NIAAA groups economic costs of alcohol problems into five major areas: lost production,

medical and health care, accidents (motor vehicle and fire), criminal justice system, and "social responses." The last category includes the direct costs of prevention and rehabilitation programs, as well as certain indirect costs that may be induced by alcohol-related unemployment (e.g., welfare payments).

The cost categories used in this study are generally consistent with those adopted by NIAAA. Since Air Force costs are the primary concern here, some differences arise by excluding those cost factors that have a negligible impact on Air Force resources. For example, welfare or disability payments to separated personnel are not included, since these costs are borne by agencies other than the Air Force.

A further departure from NIAAA studies arises from our ability to use the Prevalence Study data (Polich and Orvis, 1979) for direct measures of alcohol-related impairment. For example, in the NIAAA studies, lost production was derived by comparing annual household income differences between families with and without problem drinkers. However, since problem drinkers are known to have lower job status and educational attainment than the general population, it is very difficult to separate out the portion of the income difference attributable directly to alcohol disabilities, as opposed to the portion due to general income differences unrelated to alcohol abuse. Our choice was to rely on direct production measures, such as alcohol-related absenteeism, lost efficiency, and attrition (separation) from the Air Force.

The cost factors used in this study are shown in Table 4.1. We have distinguished five major categories, most of them having several components.

Table 4.1

## COST FACTORS RELATED TO ALCOHOL PROBLEMS

Category	Cost Factors
Lost production	Lost work time Lost supervision time Attrition
Medical	Hospitalization Outpatient visits Fatalities
Property damage	Damage to Air Force property
Law enforcement	DWI/DUI Alcohol incidents Article 15s
Alcohol control program	Social Actions ARCs

*Lost production* includes three cost factors: work time lost by the alcohol abuser; supervisors' time lost while dealing with alcohol abusers in their units; and attrition costs for alcohol-related separations. Lost work time includes not only absenteeism, but also shortened workdays and lower productivity related to alcohol misuse. Attrition costs consist mainly of unrepaid training costs that depend on length of service.

*Medical* costs arise from demands on the Air Force health care system as a result of alcohol-related illnesses and injuries. The three factors identified in this category include inpatient hospitalization costs, the costs of outpatient visits, and certain special costs incurred for alcohol-related fatalities. Most of the Air Force costs for fatalities consist of benefit payments

to surviving dependents. Hospital costs exclude inpatient (ARC) rehabilitation costs, which are counted in the Alcohol control program category.

*Property damage* costs stem from accidental destruction of government property resulting from alcohol misuse. This category is intended to capture the costs of both minor mishaps (such as motor vehicle accidents) and major accidents (such as "Class A" airplane crashes).<sup>1</sup> We will comment later on certain limitations in obtaining a complete accounting of costs in this category.

*Law enforcement* costs arise from time spent by base Security Police and legal personnel in handling certain types of alcohol-related incidents. The three types of incidents identified are driving while intoxicated or under the influence (DWI/DUI), nondriving incidents such as fights, and punishments (Article 15s) imposed for regulation infractions. The driving and nondriving incident costs arise from lost Security Police time, while the punishment or Article 15 costs arise from legal staff time.

*Alcohol control program* costs include the costs of all prevention and rehabilitation activities of Social Actions, as well as program costs for the ARCs. This category is confined to direct program costs for all prevention and treatment activities; regular hospital and outpatient costs for alcohol-related illnesses or accidents are counted in the Medical category.

### Cost Factor Estimation

With one exception, cost estimates had to be derived for each factor shown in Table 4.1. The exception was the cost of Social Actions programs, for which a total budget figure was available. For the other factors, the estimation procedure normally involved several steps. First, the occurrence rate for each problem was tabulated by using the Prevalence Study results. Second, a "unit" cost per occurrence was calculated, based on a variety of sources. The sources and average unit costs are shown in Table 4.2. Finally, the total cost for the factor was derived by multiplying the unit cost by the occurrence rate and weighting to reflect the total Air Force population in 1977. In some cases, the number of occurrences was also derived from secondary sources, as specified in the more detailed review below.

The number of workdays lost because of alcohol-related problems was estimated from the Prevalence Study by summing measures of absenteeism, lower job productivity (due to hang-over), intoxication on the job, and arriving late or leaving early from work. Time lost because of absenteeism was simply the number of days a person did not show up for duty because of drinking; time lost because of arriving late/leaving early, intoxication on duty, or reduced job productivity was assumed to equal one-fourth of a workday per occurrence.<sup>2</sup> The number of workdays lost by a person was multiplied by his/her daily Pay and Allowances rate, according to the 1977-1978 Air Force Pay and Allowances schedules. As shown in Table 4.2, the average cost of one day's Pay and Allowances for persons with alcohol-related lost work time was \$41.<sup>3</sup>

Supervisor costs were calculated in a similar manner, again using data collected by the Prevalence Study. The number of days spent by a supervisor dealing with alcohol-related problems in his unit was multiplied by that supervisor's daily Pay and Allowances. The average cost of a lost day for supervisors who dealt with alcohol-related problems was \$58.

The frequency of alcohol-related attrition was estimated from the treatment sample, based on the data provided by separated personnel concerning whether they left the Air Force for

<sup>1</sup>The Air Force designates major aircraft accidents as "Class A" if they result in a fatality or in government losses exceeding \$250,000.

<sup>2</sup>To avoid double counting, days of intoxication on duty were counted insofar as they exceeded days of reduced productivity due to alcohol. The use of a quarter day lost for each occurrence of the last three incidents is consistent with results of the Education Study (Carpenter-Huffman et al., September 1981).

<sup>3</sup>Since the person losing work time is not lost to the Air Force, no component is added for recruiting, training, and other support costs.

Table 4.2

## AVERAGE UNIT COSTS FOR COST FACTORS

Factor	Average Unit Cost (\$)	Source
Work time lost	41	Air Force Pay and Allowances Schedule
Supervision time lost	58	Air Force Pay and Allowances Schedule
Attrition	3,377	Air Force Inspection and Safety Center, Rivera Study <sup>a</sup>
Hospitalization	165	Air Force Medical Resources Division
Outpatient visits	22	Air Force Medical Resources Division
Fatalities	38,575	Air Force Inspection and Safety Center, Mishap File
Damage to Air Force property	300	4-Base analysis (Security Police files)
DWI/DUI	18	4-Base analysis (Security Police personnel)
Alcohol incidents	18	4-Base analysis (Security Police personnel)
Article 15s	97	4-Base analysis (Judge Advocate General personnel)
Social Actions	5.4 million <sup>b</sup>	Social Actions budget <sup>c</sup>
ARCs	1.1 million <sup>b</sup>	ARC interviews (ARC staff Pay and Allowances)

<sup>a</sup>"Assessment of U.S. Air Force Injury and Fatality Cost Standards," Mark Rivera, Ground Safety Branch Operations Division, July 1975.

<sup>b</sup>Total program cost. Excludes P & A loss from persons attending education seminars or rehabilitation programs.

<sup>c</sup>Includes an apportioned cost from the drug education budget covering prevention activities (.8 million), since alcohol prevention costs cannot be separated out. Excludes the Surgeon General's budget category for "Treatment/rehabilitation" (9.4 million), which represents general medical services that are subsumed by our Medical category.

alcohol-related reasons.<sup>4</sup> The cost of an alcohol-related separation was assumed to result from unrepaid training costs corresponding to the person's pay grade. Table 4.2 shows that the average cost of unrepaid training for alcohol-related separations was \$3377. Unrepaid training cost figures were provided by the Air Force Inspection and Safety Center, and are consistent with those incorporated into DoD procedures.

Estimating the average cost of hospital days and outpatient visits required special consideration because we wanted to estimate routine medical costs arising from alcohol problems separately from the cost of rehabilitation services. The Air Force Medical Resources Division (MRD) supplied the basic medical costs of a hospital day and an outpatient visit. Inpatient costs included staffing, lab tests, medications, and materials; expenses such as capital costs, depreciation, training costs, military retirement, and physician bonuses were not included in the MRD figures. A recent Air Force study found that the inclusion of training costs would result in a 10-percent increase in the cost of an inpatient day.<sup>5</sup> The inclusion of the other expenditures listed above was also estimated to result in a 10-percent increase. Therefore, we augmented the MRD figure by 20 percent. The resulting estimated cost of a hospital day was \$165; this figure is somewhat less than the national average (\$198), which includes capital

<sup>4</sup>The results presented in Chapter 3 (Table 3.14) strongly support the validity of the responses to this survey question.

<sup>5</sup>The study was conducted for the Deputy Surgeon General by the Medical Resources Division of the Air Force. See also Berry and Boland, *The Economic Cost of Alcohol Abuse*, Free Press, 1977, p. 89.

outlays for physical plants but excludes physicians' fees.<sup>6</sup> The average cost of an outpatient visit was estimated to be \$22. Both estimates reflect 1977 dollars.

The Air Force Inspection and Safety Center supplied figures for the average cost and frequency of alcohol-related fatalities by pay grade. These figures yield an overall average cost of \$38,575 for an alcohol-related fatality, most of which reflects compensation and death benefits paid to surviving dependents.

The cost of damage to Air Force property caused by alcohol-related accidents was estimated by two different procedures. The first relied on official records of alcohol-related accidents and associated costs, which are maintained by the Air Force Inspection and Safety Center at Norton AFB. The second used the Prevalence Study results to estimate the number of such accidents and base Security Police records to estimate the cost per occurrence. The Security Police data consisted of "rap"-sheet information for 100 nondriving accidents and 200 DWI-related accidents that was collected at four bases. This sheet contains specific information about the property damaged in each accident, from which an average cost of \$300 per occurrence was derived. (Appendix G describes the damaged property and shows how the cost estimate was calculated.) This figure is much lower than the average cost derived from official records (\$1289); however, the number of accidents according to the Prevalence Study results is much higher than that indicated by the records. Together, these differences suggest that the official records contain the most severe cases of property damage, but miss numerous instances of less severe damage. Since the second estimation procedure yields a higher total aggregate cost, we used the latter estimate.

In the case of law enforcement factors, we also estimated costs by collecting special data at four Air Force bases. We interviewed Security Police and legal personnel to determine the amount of time they spent processing DWIs and DUIs, alcohol incidents such as fighting or drunk on station, and Article 15 punishments. We also determined the pay grades of the persons who performed this work. This information was used to derive an average cost for each type of incident.

As noted earlier, aggregate budget figures were available on the cost of the Social Actions component of the Alcohol Abuse Control Program. The Social Actions cost shown in Table 4.2—\$5.4 million—is an adjusted figure derived from the budget data. Two adjustments were made. First, since most prevention and education activities (e.g., substance abuse seminars) focus on both drugs and alcohol, we used an apportioned share of the cost of all prevention activities (\$.8 million). Second, the Air Force category of "Treatment/rehabilitation"—representing Surgeon General expenditures of \$9.4 million—was excluded, because it represents general medical services in addition to ARC treatment. Such general services are subsumed by the Medical category described above. The cost for ARC treatment alone (\$1.1 million) was estimated directly from special ARC staff interviews. ARC costs reflect primarily the Pay and Allowances of the ARC staff who provide services for alcohol clients.

### **Total Cost of Alcohol Abuse**

The estimated cost of alcohol problems is shown in Table 4.3 by major category. Alcohol abuse cost the Air Force \$62.4 million in 1977. Lost production accounted for \$26.9 million, the largest single cost. This figure includes the cost of attrition, estimated at \$2.4 million. Medical costs were the second most expensive outcome of abuse, totaling \$21.3 million. This includes expenditures of \$4.3 million for alcohol-related fatalities. The bulk of the remaining medical costs reflects hospitalization for alcohol-related illnesses or accidents (\$15.8 million).

<sup>6</sup>American Hospital Association, *Hospital Statistics*, 1977 Edition, Chicago. The Air Force figure used by MRD in 1980 was \$177 per day. We are not sure to what extent this reflects inflation or a different methodology for attributing costs.

Table 4.3

## ESTIMATED COST OF ALCOHOL PROBLEMS, 1977

Category	Cost (\$ millions)
Lost production	26.9
Medical	21.3
Property damage	5.3
Law enforcement	2.4
Alcohol control program	6.5
Total	62.4

In contrast, law enforcement costs were comparatively small. Driving incidents, while the most frequent problem in the law enforcement area, are apparently relatively inexpensive to process. Also, although Article 15s are a common law enforcement response to alcohol incidents, minor and first-time offenses are normally punishable by a written or oral reprimand, which requires relatively little staff time. The low law enforcement cost (\$2.4 million) thus reflects, in part, the relative infrequency of serious or repeat offenses in the Air Force.

For several reasons, the figures shown in Table 4.3 probably provide a lower-bound estimate of alcohol abuse costs in the Air Force. For example, we have no way to calculate indirect effects of alcohol abuse, such as an accident that occurs because of a mechanical malfunction caused by the substandard work of a mechanic with a drinking problem. More importantly, the property damage category does not include any major aircraft accidents. The cost of losing a single C5 transport would itself exceed the total costs shown in Table 4.3. The Safety Center has reported no alcohol-related major aircraft accidents since 1971. However, the methodology for determining whether alcohol played a role in such accidents is fraught with problems, since ethanol found in tissue samples of crew members can be generated by tissue decomposition as well as by prior alcohol consumption. This means that most accident investigations must rely on collateral reports of the subject's drinking by spouses and colleagues, which under the circumstances may be of questionable validity. At the very least, it seems statistically unlikely that none of the 741 airplane crashes between 1972 and 1978 were alcohol-related, since the Air Force estimated that nearly one of every 100 major crashes were alcohol-related during the years 1962-1971.<sup>7</sup>

### Cost of Abuse by Alcohol Problem Group

The Prevalence Study data allow us to conduct an additional cost analysis rarely found in alcohol research: we can attribute costs according to problem severity, using the groups distinguished by our overall measure.<sup>8</sup> In this breakdown, we have excluded Social Actions and ARC costs, in order to observe the costs of problem behaviors independently of rehabilitation expenses.

The cost breakdown by problem group is shown in Table 4.4. The first column shows the percentage of the Air Force population in each group. Alcohol dependent persons comprised only 4.6 percent of the total and were outnumbered by the nondependent problem group by 2

<sup>7</sup>Between 1962 and 1971, the Air Force estimated that 22 major crashes were related to alcohol. (Zeller, 1975.)

<sup>8</sup>Only one cost factor, fatalities, could not be broken down by problem group. Therefore, these costs were attributed to each group according to its proportionate share of all other costs combined.



Table 4.4

## COST OF ABUSE BY PROBLEM GROUP, 1977

Problem Group	Percent of Air Force	Total Cost <sup>a</sup> (\$ millions)	Per Capita Cost (\$)
Alcohol dependent	4.6	26.1	1003
Nondependent problem	9.3	26.7	508
No problem reported	86.1	3.0	6
Total Air Force	(N = 565,684)	55.8	99

<sup>a</sup>Excludes Social Actions/ARC program costs.

to 1. Nonetheless, the second column shows that the dependent group accounted for nearly half of all nonprogram costs in 1977 (\$26.1 million of \$55.8 million). Most of the remaining costs were attributable to the nondependent group: only \$3 million derived from persons not classified as having problems. This last cost was incurred by persons who missed one or two workdays or who made one medical visit because of alcohol in the past year.

The disproportionate share of costs incurred by the alcohol dependent group is also reflected in the third column of Table 4.4, which shows per capita costs for the one-year period. The average alcohol dependent person experienced impairment that cost the Air Force about \$1000, whereas persons with nondependent problems incurred per capita costs of half this figure. More detailed analysis shows that this differential stems almost entirely from lost workdays and non-ARC hospitalization; dependent persons report twice as many occurrences of these problems as persons classified in the nondependent group.

Although the costs of abuse are fairly serious for the two problem groups, the annual per capita cost for the total Air Force is only about \$100. This is equivalent to about two lost workdays for every enlisted person. Moreover, although \$55.8 million seems large in absolute terms, it is not large compared with a total Air Force budget that runs over \$30 billion annually. Therefore, the seriousness of alcohol problems, in terms of dollar costs to the Air Force, should be considered in proper perspective with other personnel and health problems.

### COST-EFFECTIVENESS OF REHABILITATION

From an economic standpoint, the traditional rationale of a cost-effectiveness analysis is to discover the economic returns of a program and to decide whether the returns are greater or less than the investment. This approach may have limited utility for many social and health programs, however, since such programs often provide benefits that are ends in themselves. This consideration can apply to alcohol programs, where society may wish to alleviate the adverse consequences of alcohol misuse, regardless of dollar returns from rehabilitated persons.

Nevertheless, two types of cost analyses can offer useful information for policy formulation. The first is what we might call a *relative* cost-effectiveness analysis, in which the objective is to determine whether a more efficient use of program services can be attained. That is, can the per capita cost of treatment be reduced without sacrificing effectiveness? This type of analysis is particularly relevant in the alcohol rehabilitation field, where different treatment services (e.g., inpatient versus outpatient care or various lengths of treatment) may have widely varying costs.

A second type of assessment is an *absolute* cost-effectiveness analysis of different treatment modes. This analysis is similar to the traditional approach, where we ask under what conditions a given treatment mode pays for itself in dollar savings. For example, although certain inpatient methods may be more expensive than other modes of treatment, they may nonetheless be cost-effective in absolute terms by producing savings that more than offset their costs. Given the preference for inpatient care by many clinicians in the alcoholism field, this type of analysis seems especially useful for evaluating conditions under which inpatient care pays for itself, even when outpatient care is equally effective and less expensive.

To carry out these cost-effectiveness analyses, two types of information are required. First, we must spell out the specific techniques and assumptions required to estimate the potential cost savings from rehabilitation. This estimation procedure will require the cost of alcohol abuse for our treated sample both before and after treatment. Second, the rehabilitation costs shown in Table 4.3 must be broken down into component costs for each treatment mode, including indirect costs arising from clients' lost duty time. The potential cost savings from rehabilitation can then be compared with treatment costs to determine the cost-effectiveness of each treatment mode as well as of the program as a whole.

### Potential Cost Savings from Treatment

Prior to treatment, persons with alcohol problems experience a level of impairment that can be translated into a particular cost of abuse. Cost savings from treatment arise from the reduction in those costs that would have continued in the absence of treatment. To estimate these savings, we must first calculate the pretreatment cost of alcohol abuse for the treated sample, and compare it with the posttreatment cost of abuse. Second, converting this comparison into an estimate of cost savings requires a number of important assumptions that need to be stated explicitly.

Deriving the pretreatment cost of abuse is straightforward; we simply apply the cost factors described in the previous section to the treatment sample for the 12 months prior to admission. The posttreatment cost of abuse is complicated somewhat by the problem of separation, since posttreatment abuse costs cannot be attributed to the Air Force once a person has separated.

For persons remaining on active duty, the posttreatment cost calculation parallels the pretreatment calculation; it is simply the cost of abuse for the 12 months preceding the followup survey.<sup>9</sup> For separated persons, however, the only cost of abuse calculated is the cost of premature separation, since such costs as lost work time or medical expenditures are not borne by the Air Force. Moreover, we only count attrition costs in cases where alcohol abuse was the reason for separation. It would not be appropriate to count attrition costs for persons who left the Air Force for reasons unrelated to alcohol.<sup>10</sup>

Table 4.5 shows the posttreatment costs of abuse for the treatment sample separately for the dependent and nondependent problem groups. In the first row, we note that the one-year pretreatment costs of abuse differ considerably for dependent and nondependent clients (\$1173 and \$422, respectively). This cost difference is quite similar to the results from the Prevalence Study (Table 4.4) and reflects the more severe impairment of dependent persons (prior to treatment). Similarly, the one-year posttreatment abuse costs for active-duty personnel also differ for the two groups, \$206 versus \$71. This posttreatment difference would be anticipated on the basis of initial impairment levels.

<sup>9</sup>For the small group who completed the followup questionnaire less than one year after admission, the cost figure was adjusted upward to reflect a full year.

<sup>10</sup>The nonalcohol separation group is not excluded, however, from the analysis of rehabilitation costs (Table 4.6) because pre-separation treatment costs are properly attributed to the Air Force program.

Table 4.5

## POSTTREATMENT COST FACTORS (PER CAPITA)

Cost Factor <sup>a</sup>	Admission Status	
	Alcohol Dependent	Nondependent Problem
Pretreatment cost (I)	\$1173	\$ 422
Posttreatment cost for active-duty persons (F)	\$ 206	\$ 71
Attrition cost for alcohol-related separations (S)	\$3102	\$3365
Proportion of alcohol-related separations ( $P_S$ )	16%	9%
Proportion remaining on active duty ( $P_A$ )	66%	67%

<sup>a</sup>Letters in parentheses refer to terms in formulas (1) through (4), below. All figures are one-year costs, based on the treatment sample data.

Although both groups have about the same relative reduction in costs after treatment, the absolute pretreatment-posttreatment cost difference is larger for the dependent group than for the nondependent group (\$967 versus \$351), mainly because dependent persons have much higher pretreatment costs. The implication is that dependent persons can be assigned to more expensive treatment than nondependent persons, since their potential savings are greater.

The average attrition costs for alcohol-related separations are about the same for both groups, ranging between \$3100 and \$3400. This correspondence indicates that the two separation groups have similar pay-grade distributions, since attrition costs vary according to rank. Although the costs are comparable, the rates of attrition are not. As shown in Table 4.5, dependent persons have about twice the rate of alcohol-related separations as nondependent persons.

The next step is to compare posttreatment costs with pretreatment costs; their difference estimates the potential cost savings due to rehabilitation. Ideally, this cost reduction should be compared with the savings for a randomly assigned control group that did not receive treatment, since some persons might improve without rehabilitation. In nonexperimental field studies such as ours, however, there is no such comparison group. This difference is therefore used to estimate cost savings arising from treatment, contingent upon additional assumptions.

The most important assumption made here is that, in the absence of treatment, our sample would have continued to incur its pretreatment abuse costs for some duration of years. Given this assumption, the first-year cost savings (or losses) arising from treatment can be estimated by subtracting the posttreatment costs of abuse from pretreatment costs. Cost savings can be calculated for longer periods by assuming that posttreatment costs for *active-duty personnel* remain at the same level for several years after treatment. This implies that the first-year cost savings become annual cost savings for active-duty persons. Total active-duty savings are then estimated by assuming that annual savings last from 1 to K years. In contrast, posttreatment costs associated with alcohol-related separations are assumed to be limited to a one-time cost of attrition.

With these assumptions, the cost savings calculations can be expressed with two cost formulas in which all terms are expressed in annual per capita dollars as follows:

$$C_1 = KI(P_A + P_S), \quad (1)$$

$$C_2 = KFP_A + SP_S + T, \quad (2)$$

where  $I$  = cost of abuse at admission (one year pretreatment),

$F$  = cost of abuse at followup (one year posttreatment),

$S$  = cost of alcohol-related separations (first year only),

$T$  = cost of treatment,

$P_A$  = proportion of program entrants on active duty at followup,

$P_S$  = proportion of program entrants with alcohol-related separations,

$K$  = number of years over which cost savings endure.

The first equation represents the total per capita cost over  $K$  years without treatment; the second represents the cost incurred for the same period with treatment. A given treatment modality is cost-effective (in absolute terms) to the extent that the pretreatment abuse cost extended over  $K$  years ( $C_1$ ) exceeds the combined costs of treatment, attrition, and posttreatment abuse for the given modality ( $C_2$ ).

Another way to carry out the cost analysis is to set  $C_1 = C_2$ ; this represents the "breakeven" point at which a given treatment method pays for itself in cost savings. In this case, we can combine formulas (1) and (2) and solve for  $T$  as follows:

$$T = KI(P_A + P_S) - (KFP_A + SP_S) \quad (3)$$

or, equivalently,

$$T = KP_A(I - F) + P_S(KI - S). \quad (4)$$

If the cost of a given treatment modality is less than or equal to  $T$  in formula (4), then we can say that the modality pays for itself in cost savings arising from reduced rates of alcohol problems.

It should be emphasized that the assumptions implicit in formulas (1) through (4) oversimplify reality; however, such simplification is dictated by limitations of the available data. Most importantly, the model may overestimate cost savings due to treatment. This is true first because some *untreated* persons may experience "spontaneous" remission (particularly as  $K$  increases), and second because some *treated* persons may relapse, resulting in higher posttreatment abuse costs after the one-year point.<sup>11</sup> Only a long-term study with a randomly assigned, untreated control group could resolve this issue with certainty. Nonetheless, the present analysis is useful in evaluating the potential cost savings arising from Air Force rehabilitation methods.

### Cost of Rehabilitation

The alcohol program costs shown in Table 4.3 covered prevention activities as well as rehabilitation services. For the comparative cost analysis, we need to isolate rehabilitation

<sup>11</sup>A recent national followup study suggests, however, that remission rates may stabilize by the one-year point (Polich et al., 1981).

costs and break them down separately according to treatment mode: inpatient treatment (14-day and 28-day programs), outpatient counseling, and the awareness seminar.

Rehabilitation program costs were estimated by using data from three sources: (1) a survey conducted by the Occupational Measurement Center (OMC); (2) Rand interviews of Social Actions and ARC personnel; and (3) the Air Force alcohol abuse control budget for FY 1977. The OMC surveyed all personnel assigned to the drug/alcohol career field in 1977. The results indicated the amount of time these individuals spent on various functions, such as prevention, identification, treatment, and administration and support. In addition to the OMC survey results, we used information obtained during structured interviews of personnel in the 13 Social Actions and 7 ARC study programs. The interviews provided staffing information (by pay grade) and estimates of how persons spent their time. The interview data also provided cost estimates for support, remodeling, materials, and TDY and PCS expenses. Facility costs, maintenance, and other nonpersonnel operating costs were excluded because none of the facilities were constructed specifically for the purpose of alcohol treatment and could be used for other purposes if the treatment programs did not exist.

The OMC survey data indicated that Social Actions personnel allocated their time as follows: prevention/education, 32.1 percent; local rehabilitation (outpatient counseling), 63.8 percent; and awareness seminar, 4.1 percent. The total Air Force Social Actions budget shows \$4.61 million spent on Social Actions efforts in FY 1977.<sup>12</sup> Allocating this amount according to the time-spent results yields direct program costs of \$.19 million for the awareness seminar and \$2.94 million for outpatient counseling. Persons who enter the local counseling program also require medical diagnostic exams and rehabilitation committee meetings. Based on Social Actions staff interviews, we calculated that these two activities add about \$.79 million in non-Social Actions costs, yielding a total direct cost of \$3.73 million for local outpatient counseling.

ARC treatment costs were estimated from staff interviews rather than the Air Force budget entry ("Treatment/rehabilitation," \$9.4 million) because the budget figure includes all medical services for alcohol-related conditions given outside formal ARC treatment. The interviews yielded an estimate of \$1.14 million for ARC direct program costs. In addition, we assumed a travel cost of \$150 per client to and from the ARC.

The total costs were converted to per capita costs by dividing by the number of persons receiving each type of treatment; these numbers were 6732 for the awareness seminar, 5946 for local outpatient counseling, and 1194 for ARC treatment. Unlike the figures in Table 2.2, these numbers indicate the *total* number of clients attending each program component, and reflect the fact that most clients receive multiple services. (See Table 2.3.)

In addition to direct program costs, the Pay and Allowances paid to clients while undergoing treatment represent a significant indirect cost of rehabilitation. In effect, this is an opportunity cost, since time spent receiving rehabilitation services cannot be used to perform normal duties. Using the treatment records obtained for the rehabilitation sample and information concerning the pay grades of these clients, we estimated per capita P & A costs for the clients in each mode of treatment. Lost time was assumed to be 8 duty hours for the awareness seminar, an average of 8 duty days for outpatient counseling (16 sessions at 4 hours per session, including getting to and from Social Actions), and 25 and 15 duty days for the 28-day and 14-day ARC programs, respectively, including a 5-day average allowance for travel and detoxification. We then added these indirect costs to the direct program costs described earlier to estimate the total per capita cost of alcohol rehabilitation in the Air Force.

The per capita cost of rehabilitation in 1977, broken down into direct and indirect costs, is shown in Table 4.6. The direct costs include the costs for all services received by the clients assigned to each treatment mode; given the fact of multiple services, these figures are higher

<sup>12</sup>This total excludes the Surgeon General's entry of \$9.4 million for "Treatment/rehabilitation."

Table 4.6

## COST OF REHABILITATION, 1977 (PER CAPITA)

Rehabilitation Mode	Element Costs (\$)	Total per Capita Cost (\$)
Inpatient Treatment (ARC) <sup>a</sup>		
28-day program		
Direct program cost	1705	3057
Indirect P & A cost of clients	1352	
14-day program		
Direct program cost	1172	1996
Indirect P & A cost of clients	824	
Outpatient Counseling (Social Actions)		
Direct program cost	649	929
Indirect P & A cost of clients	280	
Alcohol Awareness Seminar (Social Actions)		
Direct program cost	28	59
Indirect P & A cost of clients	31	

<sup>a</sup>Combining both 28-day and 14-day programs, weighted approximately 3 to 1, the average per capita cost of the inpatient treatment mode is \$2792 (\$1572 in direct program costs).

than the per capita costs of the program components. Not surprisingly, inpatient care is the most expensive of the three modes. The 28-day program (\$3057) is more than three times as expensive as outpatient counseling (\$929). As expected, the 14-day inpatient program (\$1996) is considerably less costly than the 28-day program, but is still far more expensive than the outpatient mode.<sup>13</sup>

Although less costly than inpatient treatment, outpatient counseling is still fairly expensive. It should be noted that about 20 percent of the direct Social Actions cost reflects centralized overhead expenses (headquarters staff, training, research, etc.), so that the marginal direct cost of counseling would be on the order of \$500 per client. Therefore, while the \$929 figure is appropriate for evaluating the current cost-effectiveness of the outpatient mode, it overstates somewhat the cost of additional clients.

Finally, the Alcohol Awareness Seminar is very inexpensive (\$59). In part, this is because the seminar has a higher client to counselor ratio than the other modes; moreover, this mode requires far less staff time for paperwork and rehabilitation committee meetings.

### Relative Cost-Effectiveness of Rehabilitation

We have distinguished relative and absolute cost-effectiveness analyses. By relative cost-effectiveness, we mean identifying ways of minimizing per capita costs without reducing effectiveness. A relative cost analysis is simplified by the effectiveness findings presented in Chapter 3. These findings suggest that inpatient care and outpatient counseling are equally effective for persons who are alcohol dependent, and that the inpatient, outpatient, and awareness seminar modes yield comparable outcomes for persons with nondependent prob-

<sup>13</sup>The cost of the 14-day program exceeds half the 28-day cost because of fixed allotments for travel, detoxification, and outpatient services.

lems. Therefore, minimum per capita cost for a given level of effectiveness is attained by selecting the least expensive treatment intervention for the two types of alcohol problems. The treatment costs in Table 4.6 show that the inpatient mode is more expensive than the local outpatient mode and, in turn, that outpatient counseling is more costly than the awareness seminar. Accordingly, efficiency would be increased to the extent that dependent persons are assigned to outpatient counseling and nondependent persons to the awareness seminar.

A relative cost-effectiveness analysis leaves some important issues unresolved. First, to what extent do the rehabilitation modes pay for themselves in absolute terms? Although the Air Force does not justify rehabilitation solely on a cost-effectiveness criterion, the actual net dollar savings or cost attributable to alcohol rehabilitation is of interest for overall program planning. Second, although local rehabilitation may be more cost-effective in relative terms than the inpatient mode, it is still likely that the inpatient mode will be the intervention of choice in many cases of severe impairment. It is important, therefore, to identify the conditions under which the inpatient mode can be cost-effective in *absolute* terms. The remainder of this section will address these issues by means of an absolute cost-effectiveness analysis for each rehabilitation mode, as well as for the rehabilitation program as a whole.

### Cost-Effectiveness of Treatment Modes

Given the information in Tables 4.5 and 4.6, we can use formula (4) to carry out an absolute cost-effectiveness analysis for alternative rehabilitation modes under various assumptions about the duration of annual cost savings. The entries in the upper panel of Table 4.7 represent the potential per capita cost savings attributable to rehabilitation, assuming that annual (first-year) cost savings continue for one year, two years, and so forth. Per capita treatment costs are shown in the lower panel. A given treatment method "pays" for itself whenever the savings entries in Table 4.7 exceed the per capita cost of the treatment modality. When the entries are less than the cost of treatment, the modality costs more than its potential savings.

Table 4.7

#### POTENTIAL PER CAPITA COST SAVINGS DUE TO REHABILITATION

Assumed Duration of Annual Cost Savings	Admission Status	
	Alcohol Dependent	Nondependent Problem
One year	\$ 330	\$ -30 <sup>a</sup>
Two years	1156	243
Three years	1982	516
Four years	2808	789

	Rehabilitation Mode		
	Inpatient (ARC) 28-day	Outpatient Counseling	Awareness Seminar
Per capita cost of treatment	\$3057	\$1996	\$929
			\$59

<sup>a</sup>Minus sign indicates loss.

The results in Table 4.7 show a potential first-year cost savings of \$330 for individuals who are alcohol dependent at admission. For those with nondependent problems, however, there is a per capita *loss* of \$30. Total cost savings increase each subsequent year by over \$800 for dependent persons, and by nearly \$300 for nondependent persons. The lower savings potential during the first year reflects the cost of alcohol-related separations, which occur almost exclusively during this period. If we assume that annual cost savings last for four years, then rehabilitation can lead to total savings of about \$2800 for dependent persons and about \$800 for nondependent persons.

Referring to the lower panel of Table 4.7, we note that the outpatient counseling mode has a per capita cost of about \$930. Therefore, this intervention is cost-effective for *dependent* persons if savings last a little less than two years. In contrast, the 28-day inpatient treatment mode costs about \$3060, and reaches the breakeven point for dependent persons only if we assume that annual savings last more than four years. The 14-day inpatient mode (\$1996) is intermediate, reaching the breakeven point after three years.

For persons with nondependent problems, the potential cost savings are considerably lower. Consequently, neither inpatient mode approaches the breakeven point within four years. Moreover, outpatient counseling is cost-effective for nondependent persons only if annual savings last about four and a half years. In contrast, the awareness seminar is cost-effective for this group if savings last a little more than one year.

In short, although the relative and absolute cost analyses are based on quite different approaches, with the latter embodying a number of crucial assumptions, they both point to the same conclusion: the cost-benefit balance of rehabilitation could be improved by making greater use of the outpatient counseling mode for dependent persons and of the awareness seminar for nondependent persons. The inpatient mode can be cost-effective, but only for dependent persons and, even then, only by assuming that remission (i.e., cost savings) persists at least three or four years. Likewise, outpatient counseling requires a minimum of four years of remission to be cost-effective for nondependent persons.

### Overall Cost-Effectiveness

The analyses in the previous section were conducted separately for each type of problem and treatment. Formula (4) can also be used to generate the total annual cost savings for all persons in all treatment modalities combined. This figure can then be compared with the total treatment cost.<sup>14</sup> A comparison of these figures indicates the cost-effectiveness of the total Air Force program for a given duration of annual savings. We assume that four years is the maximum duration of savings to the Air Force, since most clients are first-term personnel, and since the first-term force replaces itself about every 3 to 4 years.

The results of the overall analysis are shown in Table 4.8. Alcohol rehabilitation costs for 1977 were \$8.0 million. This figure reflects about \$5.1 million in direct program costs and about \$2.9 million in indirect costs attributable to lost production while persons were undergoing treatment.<sup>15</sup> The figures in the lower panel of the table represent potential cost savings from treatment, based on assumed durations of annual cost savings of one to four years.<sup>16</sup>

The results suggest that current rehabilitation expenditures are offset to the extent that annual savings in abuse costs last nearly four years. It is not clear whether annual cost

<sup>14</sup>The total treatment cost is derived by multiplying the per capita costs in Table 4.6 by the total number of persons treated in each mode (from Table 2.2) and summing. The average per capita cost of ARC inpatient treatment, combining both 28-day and 14-day programs, is \$2792 (\$1572 in direct costs).

<sup>15</sup>The total Social Actions/ARC cost figure (\$6.5 million) shown in Table 4.3 reflects direct costs only, and includes prevention costs that are inappropriate for the present analysis.

<sup>16</sup>Table 4.8 combines all persons admitted to rehabilitation, including those reporting no problems (on our overall measure) prior to admission. The potential cost savings for such individuals were assumed to be half as great as those for persons reporting nondependent problems, based on our observation, noted earlier, that about half of the "no problem reported" group did have some indication of impairment prior to admission.



Table 4.8

OVERALL COST-EFFECTIVENESS OF THE AIR FORCE  
ALCOHOL REHABILITATION PROGRAM

	Millions of Dollars
Cost of Treatment	8.0
Direct	5.1
Indirect	2.9
<i>Potential Cost Savings of Treatment</i>	
Assumed Duration of Annual Savings	
One year	0.2
Two years	3.0
Three years	5.7
Four years	8.4

savings actually last for the four years required to reach the breakeven point. Long-term remission rates for treated persons found in some national studies (e.g., Polich et al., 1981) suggest that aggregate outcome rates may be constant over this period. However, very little is known about natural remission rates for untreated persons over such a time span. Unfortunately, we do not currently have the data required to resolve these questions.

It is interesting to note that the substantial duration required to reach the breakeven point appears to be caused less by the use of the inpatient mode than by the use of outpatient counseling for nondependent persons. That is, if all 1200 persons receiving inpatient care in 1977 had received only outpatient counseling instead, treatment cost savings would have been about \$2.2 million. However, if the 4200 nondependent persons receiving outpatient care had received only the awareness seminar, treatment cost savings would have been about \$2.8 million. Of course, we emphasize again that our data are not based on a controlled experimental study; thus, we cannot be certain of the precise savings had these reassignments been made.

## SUMMARY

Our analysis indicates that alcohol abuse cost the Air Force at least \$62.4 million in 1977. This figure probably constitutes a lower-bound estimate because reliable information concerning indirect costs of abuse and alcohol involvement in aircraft accidents was not available. Lost production and medical costs, by far the most expensive outcomes of abuse, accounted for over three-fourths of the total. In contrast, the cost of the Alcohol Abuse Control Program was only about 10 percent of the overall figure.

Per capita abuse costs varied considerably according to severity of impairment. Ninety-five percent of all costs were incurred by the 14 percent of the population that experienced serious dependent or nondependent problems (Polich and Orvis, 1979). Furthermore, the alcohol dependent group, estimated at less than 5 percent of the total population, accounted for almost half of the total cost of abuse.

Rehabilitation costs were quite different for the various modes of intervention. The average per capita cost of the 28-day inpatient mode was estimated at more than \$3000 in 1977, whereas the 14-day program cost about \$2000 per client. More than half of the inpatient cost

was attributable to duty time lost while the client was undergoing treatment and to local services received from Social Actions. In contrast, the outpatient counseling mode was considerably less expensive, at about \$900. The awareness seminar represented by far the least expensive intervention, costing only about \$60 per client.

Because the study data suggest that the treatment modes are equally effective, a strict interpretation of these wide cost variations would imply that program efficiency could be maximized by assigning clients to the least expensive intervention appropriate for their individual problems. This would involve outpatient counseling for highly impaired personnel and seminar attendance for clients with nondependent problems. However, this interpretation is too simplistic because more intensive interventions may be preferable in certain instances. Recognizing this, we conducted an analysis to explore the conditions under which the cost of each treatment mode is offset by savings realized from rehabilitated personnel.

If we assume that aggregate abuse costs remain constant for several years in the absence of treatment, then the study data suggest that dependent clients must remain in remission for at least four years to offset the cost of the 28-day inpatient mode. In contrast, outpatient counseling would be cost-effective for such persons in less than two years. For clients with nondependent problems, potential cost savings are much lower. As a result, inpatient modes would require at least 10 years to reach the breakeven point. This result is worth emphasizing because nondependent clients account for more than half of the ARC attendees. Although more cost-effective, outpatient counseling would still require between four and five years to break even. On the other hand, the awareness seminar mode would be comparatively cost-effective for nondependent clients, with savings offsetting treatment costs after slightly more than one year.

When considered with present treatment assignment patterns and problem rates, the foregoing results suggest that current rehabilitation expenditures are offset to the extent that posttreatment abuse savings persist for nearly four years. It is not clear whether this is the case. Recent national studies provide some evidence that aggregate outcome rates may remain constant after the first year, but little is known about long-term remission rates for untreated persons. While the absolute cost-effectiveness of the program is not clear, the data suggest that the relative balance of costs and benefits would be improved by heavier emphasis on the less expensive treatment interventions. Moreover, improving the cost-benefit balance would help to provide the resources required to identify and rehabilitate a greater portion of the problem population.

## Chapter 5

### CONCLUSIONS

Alcohol misuse is a serious problem in the United States, affecting the military services as well as the civilian population. Recognizing this, the Air Force has established a worldwide rehabilitation program, based on an official policy of "[restoring] to effective functioning persons with problems attributable to alcohol abuse. . . ."

The Air Force program offers three major types of services: education about alcohol ("Alcohol Awareness Seminar"); outpatient counseling; and inpatient care. Education and outpatient counseling services are provided in local rehabilitation programs by Social Actions personnel; inpatient care is provided at ten regional Air Force hospital Alcohol Rehabilitation Centers (ARCs). The assignment of services is based on the seriousness of the client's alcohol problem. Thus, in 1977 for example, about 15 percent of all persons referred for treatment were assigned to centralized inpatient care—the most intensive service—while 85 percent were assigned to local rehabilitation programs. This assignment procedure distinguishes the Air Force effort from a number of other large programs and, in particular, from the U.S. Navy program, which heavily emphasizes inpatient treatment.

### RESEARCH QUESTIONS AND METHODS

The use of differing intensities of intervention and the goal of matching these treatments to the severity of the client's problem give rise to several important questions concerning the efficacy and cost-benefit of program services, which form the basis of the present research. First, are clients free of serious alcohol problems after they receive rehabilitation services, and do persons receiving different services show comparable remission rates? Second, are the different interventions equally cost-effective, and to what degree do savings realized from rehabilitated personnel offset treatment costs? Finally, what proportion of the persons experiencing alcohol problems is currently identified, and, if the rate is low, how could a larger number of persons be rehabilitated within existing budgetary resources?

To address these issues, we collected a large amount of systematic data concerning the rehabilitation program, the services received by program clients, the alcohol problems experienced by these individuals before and after treatment, and the costs of these services and problems. Most of this information was obtained during a field study of 20 selected programs: these included 7 of the 10 regional ARCs and 13 Social Actions programs, which were located overseas as well as within the CONUS. The individuals stationed at these locations are representative of the general Air Force population on the demographic characteristics most associated with alcohol use, and, moreover, the local procedures concerning entry into rehabilitation and the assignment of services are consistent with those used throughout the Air Force. Reflecting this comparability, the study data indicate that the clients at the selected programs are representative of all clients throughout the Air Force.

Admission questionnaires were administered to 1115 active-duty personnel who entered the study programs from June 1977 through May 1978, representing approximately 15 percent of all new clients throughout the Air Force during the same period. The respondents subsequently completed a followup questionnaire after receiving rehabilitation services; in most cases, followup occurred between January and June 1979. Persons remaining on active duty and those who left the Air Force were both generally cooperative; an excellent response

rate of nearly 93 percent was obtained for the active-duty personnel located at followup, and a satisfactory rate of approximately 70 percent was obtained for the separated personnel with valid home addresses.

Staff members at the 20 study programs provided detailed treatment data for each participant throughout the course of his/her rehabilitation. Information concerning staff characteristics, rehabilitation services, and cost issues was collected during the site visits made by the Rand research team.

## CLIENTS

The study data indicate that alcohol program clients comprise a more junior, less married population than the Air Force at large. This finding is consistent with results of the Rand Prevalence Study, which established higher problem rates for these groups. Nearly all the clients experienced serious alcohol-related problems during the 12 months prior to admission. Our problem measures distinguish high levels of alcohol dependence symptoms—suggesting physical addiction—and 15 types of nondependent problems reflecting work, health, or social/legal impairment. According to these measures, alcohol dependence was three times as common among program entrants as in the general Air Force population, and the majority of clients had recently experienced multiple adverse consequences as a result of their drinking. For most clients, however, these consequences reflected nondependent types of problems; the number of persons reporting such problems was four times as great as the number reporting high levels of dependence symptoms. The most common problem reported was being arrested for DWI. According to the study data, DWI arrests accounted for one-third of all program entries.

## REHABILITATION SERVICES

We noted earlier that the rehabilitation program comprises three primary components: inpatient care at regional ARCs; outpatient counseling in local Social Actions programs; and the awareness seminar (also attended at the local level). Although these three components are conceptually distinct, the study data indicate that most clients receive more than one component, and that the assignment procedure is hierarchical. As a result, the treatment services assigned in the field may be divided into three modes: inpatient care, which in nearly all cases also includes local outpatient counseling and the awareness seminar; outpatient counseling, which also includes the seminar; and attendance of the awareness seminar only. Persons assigned to the outpatient counseling mode may receive group and/or individual sessions. There is some difference in the type and number of sessions across programs; on average, however, the data indicate that outpatient clients attended a median of 11 sessions, and that group sessions were three times as common as individual sessions.

The mode of treatment to which a client was assigned varied according to the severity of the client's problem at admission. Among highly impaired individuals—those classified as alcohol dependent—comparable numbers were assigned to the inpatient and outpatient counseling modes, which together accounted for approximately 90 percent of all assignments. As might be expected, less than 10 percent of the highly impaired clients attended only the awareness seminar. In contrast, among less-impaired individuals—those with nondependent problems—outpatient counseling was by far the most common treatment mode, accounting for nearly two-thirds of all assignments. Moreover, almost one-fourth of these individuals attended only the awareness seminar, while just 11 percent received inpatient care.

## EFFECTIVENESS OF TREATMENT

The study results indicate that clients improved substantially after receiving rehabilitation services. Although their posttreatment problem rate remained about twice as high as the rate of alcohol problems in the general Air Force population, the number of clients reporting serious problems was reduced by more than 50 percentage points after treatment. Moreover, significant improvement was reported both by separated personnel and, especially, by persons remaining on active duty.

Although treatment appears effective, the data suggest that the Air Force identifies less than 10 percent of its personnel who experience alcohol-related problems in a given year. Moreover, the identification rate among highly impaired individuals appears to be somewhat lower than among less-affected personnel; this difference may be due, in part, to the tendency of nondependent abusers to experience incidents involving the military justice system, which may facilitate identification.

Comparisons among the three primary rehabilitation modes suggest that the less intensive treatments are as effective as the more intensive interventions. Among clients showing high impairment levels at admission, persons assigned to the outpatient counseling and inpatient modes improved comparably. Among nondependent clients, individuals assigned to local rehabilitation programs showed remission rates that were comparable to those reported by persons who had received centralized inpatient care; moreover, at the local level, equivalent remission rates were found for clients attending only the awareness seminar and persons receiving outpatient counseling services.

The results of numerous additional analyses made using different treatment classifications or impairment measures conform to the same pattern. Comparisons between 28-day and 14-day inpatient programs, between large and small numbers of outpatient sessions, and between individual and group counseling services suggest that these interventions had comparable outcomes. Other analyses indicate that the comparability of outcomes among the three primary treatment modes is affected very little by the use of different problem measures. Finally, the validity of these results is supported by several comparisons made between official record information and the self-reports of our survey respondents.

In interpreting these findings, it is important to remember that we evaluated the rehabilitation program as it operates in the field and that clients receiving the intensive components of the Air Force rehabilitation program normally receive the less intensive components as well. Thus, the proper interpretation of the inpatient-outpatient comparisons is that the two- to four-week resident programs (of intensive counseling and other services) at the ARC's did not significantly increase the remission rate beyond that associated with several months of outpatient counseling at Social Actions. This does not mean that the ARC programs did not benefit clients. Rather, it suggests that the benefit clients derived from ARC attendance could also have been provided by intensive Social Actions counseling.

Two other consequences of the field study procedure should also be reiterated. First, the field procedure precluded the assessment of a no-treatment condition. Thus, the contribution of natural remission to posttreatment improvement cannot be assessed. It seems reasonable to suppose, however, that identification in itself, together with the potential negative consequences of continued alcohol abuse on one's Air Force career (following identification), provide a powerful basis for improvement, at least for clients without severe problems at admission.

Second, because a field design was used, the persons assigned to different treatment modes had different impairment levels at admission. This is the assignment pattern one would expect; however, it creates an analytical requirement commonly found in alcohol research, namely, that initial impairment differences must be controlled for when comparisons are made among treatment modes. The study results indicate that different treatment assignment patterns between alcohol dependent and nondependent clients account for most of the

variation in admission impairment levels among the rehabilitation modes. Thus, we directly controlled for these differences by comparing the effectiveness of the modes separately for dependent and nondependent clients. In addition, we used a statistical adjustment procedure to control for the smaller residual impairment differences within each problem group among clients assigned to different interventions. We believe that these procedures are effective in controlling for impairment differences among clients assigned to the three modes of treatment. However, the possibility that some uncontrolled variable contributed to the findings cannot be ruled out definitively. As for the issue of natural remission rates, conclusive evidence awaits a study using randomized treatment assignment.

Given the limitations of our natural field study, it is worth noting that the findings are consistent with research results for the civilian population. In a recent review of 384 studies of alcoholism treatment, Emrick (1975) found only five studies meeting rigorous research standards that reported treatment mode effects. Moreover, according to Emrick, in each case the results were subject to alternative interpretations that cast doubt on the beneficial effects of the "superior" treatment. In an independent review, Edwards et al. (1977) also cite problems in the five studies, and conclude that, in general, "It is not only that the research literature is poor in reports which suggest that any particular treatment is advantageous; on the contrary it is rich in reports which demonstrate that a given treatment is no better than another."

## COST-BENEFIT OF REHABILITATION

To assess the dollar cost of alcohol abuse to the Air Force, several types of costs were distinguished according to categories established in recent research sponsored by the National Institute on Alcohol Abuse and Alcoholism; these included the cost of lost production, medical costs, property damage costs, law enforcement costs, and costs attributable to the Air Force Alcohol Abuse Control Program. Our analysis indicates that abuse cost the Air Force at least \$62.4 million in 1977. Lost production and medical costs were by far the most expensive categories, together accounting for more than three-fourths of the total figure. In contrast, control program costs represented only about 10 percent of the total, and law enforcement costs, the least expensive category, about 4 percent.

The per capita abuse cost for Air Force personnel varied according to the extent of the alcohol problems experienced by these individuals. Thus, 95 percent of the total figure was attributable to the 14 percent of the population that experienced serious dependent or non-dependent problems (Polich and Orvis, 1979). Moreover, although less than 5 percent of the population were estimated to be alcohol dependent, such persons accounted for nearly half of the total; their high cost was primarily the result of lost workdays and hospitalization for alcohol-related problems.

The cost of treatment varied considerably according to the intensity of intervention. Including the average cost of Social Actions services provided to persons sent to ARCs, the 1977 per capita cost for the 28-day inpatient mode was estimated at more than \$3000, and for the 14-day mode, at about \$2000. The outpatient counseling mode was considerably less expensive, costing somewhat more than \$900 per client. Finally, the awareness seminar mode was by far the least expensive treatment, costing only about \$60 per individual.

Given the finding of equal effectiveness, a strict interpretation of these cost figures would suggest that maximum treatment efficiency could be achieved by assigning all alcohol dependent persons—i.e., all highly impaired persons—to the outpatient counseling mode and all less-impaired clients to the awareness seminar. However, this interpretation is clearly too simple, because there may well be cases in which more intensive intervention is desirable (as, for example, when a client should be removed temporarily from a disruptive environment to

facilitate treatment progress). The results may be placed in a broader policy context by identifying the conditions under which each treatment mode may "pay" for itself in savings realized from rehabilitated personnel, even though, in general terms, alternative interventions may be as effective and may cost less.

If we assume that aggregate abuse costs remain constant for untreated persons over a period of a few years, then the study data for dependent clients suggest that inpatient mode costs are offset to the extent that remission lasts several years. The first year posttreatment (abuse) cost level would have to be maintained for about three years to reach the breakeven point for the 14-day inpatient mode, and for more than four years in the case of the 28-day mode. In contrast, the outpatient counseling mode would pay for itself in lowered abuse costs after about 21 months for dependent clients. For clients with nondependent problems at admission, the inpatient treatment mode would rarely be cost-effective, and would require about 10 to 15 years to reach the breakeven point on average. Outpatient counseling would be considerably more cost-effective, but would still require about four and a half years to break even. Finally, the awareness seminar mode would be reasonably cost-effective for nondependent clients, with abuse savings exceeding treatment costs after about 16 months.

Given present treatment assignment patterns and alcohol problem rates in the Air Force, the foregoing results imply that the average client must remain in remission almost four years for savings in abuse costs to surpass the cost of rehabilitation, assuming that he would have shown no improvement without treatment. There is recent research evidence that aggregate posttreatment problem rates may, in fact, remain relatively constant after the first year; however, natural remission rates for untreated persons have not been established for a comparable period. While the extent to which the overall program may be considered cost-effective is unclear, it is apparent that greater use of the less expensive treatment modes would improve the cost-benefit balance. This seems especially important given the low identification rate, since improving the cost-benefit balance would help to provide the resources required to identify and rehabilitate a greater portion of the problem population. It is worth noting that the long time span required for abuse savings to offset treatment costs appears to be somewhat less attributable to the inpatient mode than to the provision of outpatient counseling services for nondependent clients, even though the former intervention is quite expensive. This is because the number of nondependent clients assigned to the counseling mode far exceeds the total number of inpatients.

## RECOMMENDATIONS

Our evaluation of the Air Force Alcohol Rehabilitation Program suggests that it is largely successful in reducing the rate of alcohol problems among program participants. To the extent that improvements might be made, they appear to involve issues of cost-effectiveness and identification, rather than treatment effectiveness per se. Although it is clear that alcohol rehabilitation should not be evaluated solely in economic terms, it is also apparent that improving cost-effectiveness would have beneficial effects. One important potential benefit would be the ability to rehabilitate a greater number of personnel, given limited resources.

The Air Force already emphasizes cost-effective approaches, particularly in its preference of local rehabilitation services for the majority of program participants. Nonetheless, given the findings here, the Air Force may want to consider several steps to further reduce per capita program costs and the cost of alcohol abuse. In light of the finding of equal effectiveness for the different treatment modes, additional emphasis could be given to assigning seriously impaired clients to outpatient counseling services and less-impaired individuals to the awareness seminar. Inpatient services could be reserved for clients who clearly require hospitalization for medical reasons or whose environment seriously jeopardizes initial progress at

the local level. Moreover, the available data suggest that consideration should be given to reestablishing a 14-day inpatient mode, which could be used in conjunction with the current 28-day format and could provide similar services (for a shorter duration). Since such programs could accommodate twice as many clients in a given period, a substantial proportion of the clients could receive the shorter treatment without altering the 28-day programs at most ARCs, and the availability of inpatient services could be increased at the same time.

Given current penetration rates, greater emphasis should be placed on identifying personnel who suffer from alcohol problems. Particular attention should be given to identifying highly impaired individuals, such as those we have classified as alcohol dependent. Focussing on these persons may be justified both in terms of their greater need for assistance and in terms of their high cost to the Air Force. Our results suggest that special efforts may be required to identify such individuals, and that greater involvement of supervisors and medical personnel might be particularly useful.

It is important to emphasize that increasing the identification rate need not increase the per capita cost of rehabilitation or reduce treatment effectiveness. On the contrary, our data suggest that the penetration rate could be increased, the effectiveness of treatment preserved, and the per capita cost of rehabilitation reduced by an integrated set of changes in current treatment practices along the lines presented. For example, suppose that the penetration rate among persons with nondependent alcohol problems were tripled and that an equal proportion of the dependent personnel were identified. Moreover, let us assume that half the (proportion of) clients who would currently be assigned to the inpatient mode were assigned to outpatient counseling instead and that new inpatient assignments were evenly apportioned to 14-day and 28-day programs. Finally, suppose that half of the new nondependent clients who would currently be assigned to outpatient counseling services were assigned to the awareness seminar mode.

Given these assumptions, the annual penetration rate among alcohol abusers would be raised to approximately 30 percent. As discussed earlier, this would permit identification of the large majority of abusers whose problems persist over a few years. The data further suggest that the new assignment patterns for these clients would not reduce treatment effectiveness. At the same time, however, the analyses presented in Chapter 4 suggest that the period of remission required to offset treatment costs would be reduced by about 50 percent for dependent clients and by about 25 percent for less-impaired individuals. It is worth noting that this example assumes that ARC assignment rates would be halved for both dependent and nondependent clients. However, since nondependent clients account for more than 50 percent of the ARC attendees, a similar reduction in the ARC assignment rate could be accomplished by restricting inpatient services primarily to alcohol dependent clients. In this case, the remission period required to offset treatment costs would not be reduced for dependent clients; for nondependent clients, however, the reduction would approach 40 percent.

It is clear that changes such as those in the foregoing example would substantially increase caseloads. In this particular instance, they would double the number of inpatient days, increase the outpatient counseling load by 150 percent, and increase the awareness seminar load by 250 percent. However, to the extent that the higher caseloads could be handled without constructing new facilities, the data suggest that the additional costs (i.e., staff) required would be considerably smaller than the increase in savings realized from rehabilitated personnel. This is reflected by the reduction of remission time required to offset treatment costs, noted above. Moreover, several additional steps might be taken to further reduce costs and to reduce caseloads. One such step would be to eliminate attendance of the awareness seminar by persons receiving more intensive services. Currently, about 85 percent of such clients attend. It is very unlikely that the seminar enhances the improvement rate for these persons; however, they account for three-fourths of the awareness caseload. Assuming that the diagnostic function of the seminar could be adopted by the other services provided to these clients—which would seem reasonable—the elimination of attendance in such in-



stances appears to be feasible, and would go a long way toward reducing the heavier caseload resulting from increased identification.

A second step would be to decrease the use of individual counseling sessions by replacing them with group sessions. Although the per capita cost of individual sessions is considerably higher than the cost of group counseling (and the availability more restricted), the study results suggest that the two modalities are equally effective. Moreover, if identification rates are increased, smaller programs should find it easier to assemble groups of clients for outpatient sessions, a difficulty responsible for many assignments to individual sessions at present.

A further possible step would be to set tighter limits on the maximum number of counseling sessions a client may attend. At present, the number of sessions attended by some individuals is so large that the total sessions given throughout the Air Force could apparently be reduced by one-third without reducing the median number of sessions provided per client. Moreover, the study results suggest that if this measure were taken in conjunction with all the preceding steps, the remission period needed to offset treatment costs could be reduced to half that required by the current program.

In concluding, we wish to reemphasize several points. First, our evaluation is based on a natural field study of the rehabilitation program, rather than a randomized experiment. Thus, the contribution of natural remission to posttreatment improvement cannot be assessed, and the inferences made concerning treatment effectiveness should be viewed as tentative, rather than definitive. Second, our cost-benefit analysis requires a number of important assumptions and, in some instances, the estimation of costs savings based on available data. Therefore, our purpose is to suggest general areas of potential improvement, rather than to provide precise dollar figures pertaining to the implementation of these recommendations. Finally, we must again state that it is not our intention to imply that decisions concerning the rehabilitation program should be based solely on economic grounds, since the program serves a humanitarian function, independent of monetary considerations.

Notwithstanding these qualifications, the study results suggest a number of important conclusions. First, the current program appears to be doing a good job of rehabilitating clients, and the services offered appear to be equally effective. Our evaluation suggests, however, that the program fails to reach many individuals who experience alcohol problems. Thus, we have recommended that the identification function be given greater emphasis, and we have outlined several steps that could reduce per capita treatment costs and help to accommodate increased caseloads. Given the finding of equal effectiveness, the primary step could be to shift treatment assignments to the least costly intervention appropriate for an individual client's problem whenever possible. If taken together, we believe that measures similar to those suggested could substantially reduce per capita costs, maintain the quality of treatment, and allow the Air Force to rehabilitate a greater number of persons who suffer from alcohol problems within the available budgetary resources.

## Appendix A

### DATA COLLECTION ACTIVITIES

#### OVERVIEW

To evaluate the alcohol rehabilitation program, detailed information was collected from several sources. These data included official Air Force records, staff interviews, and a Rand field study of 20 selected Social Actions and Alcohol Rehabilitation Center programs.

The field study covered seven of the ten regional Alcohol Rehabilitation Centers. The rehabilitation center programs were deliberately oversampled for two reasons. First, we wanted to ensure that the number of inpatient clients in the study was large enough to permit separate analysis of this group. Second, we included programs in the USAFE and PACAF commands, as well as those located within the continental U.S., to ensure that the rehabilitation centers evaluated were representative of those comprising the overall inpatient program.

To facilitate the most efficient use of resources, we evaluated the Social Actions programs located at the 13 bases visited during the Rand Prevalence Study. The procedures used in selecting these installations are discussed at length in the report describing that research (Polich and Orvis, 1979). In general, two bases were randomly chosen to represent each of the eight largest Air Force commands. There were two exceptions to this procedure: (1) Osan AFB was specifically chosen as one of the two PACAF bases because assignment there is a remote tour of duty; and (2) only one base was chosen to represent the smaller Systems and Logistics commands. Wright-Patterson was specifically selected for this purpose because it hosts large numbers of individuals from both commands. The Social Actions and Alcohol Rehabilitation Center programs included in the study are listed in Table A.1.

There is good reason to believe that the 20 programs chosen provide a representative sample of clients and programs throughout the Air Force. First, the programs represent the eight largest commands, which comprise nearly 80 percent of all Air Force personnel. Second, the personnel stationed at the sample bases are known to be representative of the general Air Force population on the demographic characteristics most associated with alcohol use (Polich and Orvis, 1979). Third, our interviews with program personnel at the 20 study locations indicate that the procedures they used to determine who entered the rehabilitation program and what services the clients should receive are consistent with those used throughout the Air Force. Finally, a comparison of the study participants' pay grades with those of all persons formally identified for treatment in 1977 shows that the two distributions are in close agreement. These data are summarized in Table A.2.

After the study locations were selected, Rand staff made site visits to all participating Social Actions and Alcohol Rehabilitation Center programs. The purpose of these visits was threefold: (1) to explain the procedural details of the study to staff members; (2) to gather information about rehabilitation services and program operation; and (3) to assess the background, orientation, and attitudes of individual staff members through personal interviews.

The staff members at the selected installations were instrumental in assisting Rand with the operation of the study. Their role included identifying eligible clients as they entered the program, securing the clients' permission to be included in the study, administering the admission questionnaire, and assisting with arrangements for the followup survey. To ensure a representative sample, staff members were requested to ask all new active-duty clients to participate in the study. Veterans, dependents, and civilian employees were not considered

Table A.1

SOCIAL ACTIONS AND ALCOHOL REHABILITATION  
CENTER PROGRAMS IN THE RAND STUDY

Command	Program	Location
AFLC/AFSC	Wright-Patterson (SA)	Ohio
	Wright-Patterson (ARC)	
ATC	Lackland (ARC)	Texas
	Mather (SA)	California
	Sheppard (SA)	Texas
	Sheppard (ARC)	
MAC	Little Rock (SA)	Arkansas
	Travis (ARC)	California
	Scott (SA)	Illinois
	Scott (ARC)	
PACAF	Osan (SA)	South Korea
	Clark (SA)	Philippines
	Clark (ARC)	
SAC	March (SA)	California
	Minot (SA)	North Dakota
TAC	Nellis (SA)	Nevada
	Seymour Johnson (SA)	North Carolina
USAFE	Bentwaters (SA)	Great Britain
	Hahn (SA)	Germany
	Lakenheath (ARC)	Great Britain

Table A.2

PAY GRADE DISTRIBUTIONS FOR STUDY  
PARTICIPANTS AND THE TOTAL AIR FORCE  
REHABILITATION PROGRAM<sup>a</sup>  
(In Percent)

Pay Grade	Study Participants	Total Air Force Program
O4-O6	1	1
O1-O3	2	1
E7-E9	6	6
E5-E6	33	34
E1-E4	58	58

<sup>a</sup>For comparability with the total program figures, the study participant data are restricted to Form 1611 identifications and are weighted to reflect the true proportions of ARC and Social Actions program entrants.

eligible. Individuals assigned to the Alcohol Awareness Seminar or to other minimal services were included, as well as those assigned to more intensive treatment.

To inform the prospective participant about the purpose of the study and the provisions made for confidentiality, a Rand "Statement to the Client" was first read aloud by a staff

member. (See Appendix D.) If the individual agreed to participate, he/she then completed the admission questionnaire in private on the Social Actions or rehabilitation center premises. Upon completion, the participant sealed the questionnaire in a prepaid envelope for direct mailing to Rand. Because the questions were primarily intended to obtain pretreatment information, staff members were asked to administer the questionnaire as soon as possible after the client's entry into the program (within one week). Clients later completed the followup questionnaire, after they had received rehabilitation services. The survey procedures are discussed at length in the next section.

Using two different forms, Social Actions and Alcohol Rehabilitation Center staff provided detailed treatment information on each client. (See Appendix E.) The *Treatment Disposition Form* was completed at the time that the individual entered the program. It provided information about the client's identification, the nature of his/her alcohol problem (from the medical diagnosis and Form 1611 designation), and the initial rehabilitation regimen assigned (i.e., Alcohol Awareness Seminar, Social Actions outpatient counseling, or inpatient treatment). *Client Services Reports* were subsequently completed at regular intervals. These reports indicated the amounts and types of services provided to each client, and described the client's status as he/she progressed through the program.

All forms were mailed to Rand as they were completed. A monitoring system was established at Rand to track individuals as they went through the program; this enabled Rand project staff to easily identify any overdue forms and to cross-reference forms to ensure reliability. Frequently, clients were transferred from one of the study programs to another; this usually occurred when clients who had been entered into the study by an Alcohol Rehabilitation Center were transferred to a Rand study Social Actions program for Follow-on. In such cases, Rand communicated with program staff to ensure continuity of Follow-on reporting. Because of the large number of Air Force bases served by each rehabilitation center, however, many ARC participants were transferred to nonstudy bases following their inpatient treatment. For these individuals, the followup survey was the primary data source concerning services received in Follow-on.

## SURVEY PROCEDURES

As noted above, the data collection activities included two extensive surveys: (1) an *admission* survey, administered when clients entered the programs at the 20 study locations; and (2) a *followup* survey, administered after the study participants had received rehabilitation services.

During the period May through September 1977, Rand personnel made two-day site visits to the thirteen local rehabilitation (Social Actions) programs and seven Alcohol Rehabilitation Centers participating in the evaluation study. The forms and questionnaires to be used in the study were reviewed with local personnel, and the proper procedures for completing, administering these materials were explained. In particular, the timing and details of administration for the admission survey were covered at length. Local personnel were instructed to administer the admission questionnaire to all Air Force personnel entering the alcohol rehabilitation program until they received notification from Rand that the initial data collection phase had been completed. During the initial administration period, Rand personnel closely monitored the survey activities to ensure that the proper procedures were followed and to answer any questions that arose in the field. By May 1978, the targeted size for the admission sample had been achieved, and initial survey activities were ended.

The admission survey questionnaire is reproduced in Appendix B. Approximately one-third of the questions dealt with the background of the respondent (e.g., demographic information that might be relevant to his alcohol problems). The remaining questions focussed primarily

on the respondent's alcohol-related behavior during the 12 months prior to admission to the program. Individuals who completed the initial questionnaire were followed up during 1979, and were administered a second survey. The followup questionnaire (reproduced in Appendix C) covered the same types of demographic and alcohol problem measures assessed in the admission survey. In addition, approximately 30 items detailing the types of rehabilitation services received by the individual were added. These items were designed to complement the extensive treatment records completed by local program personnel throughout the course of each respondent's rehabilitation.

The primary followup procedure consisted of on-site survey administration by Rand personnel.<sup>1</sup> With the help of local base personnel and AFMPC (at Randolph Air Force Base), the locations of respondents in the admission sample were obtained at the time of followup. From January through June 1979, Rand personnel made circuit trips to the 73 bases with the largest numbers of study participants. In preparation for each visit, the chief of Social Actions at the base was contacted by telephone to discuss the necessary arrangements. He was asked to personally call the study participants at his base and schedule them for a group survey session during the site visit. He was also asked to send letters to their unit commanders for the purpose of excusing the participants from duty in order to complete the survey questionnaire. The need for confidentiality in making these arrangements was strongly emphasized. Unit commanders were simply informed that the respondents were being reassessed based on their initial participation in the study. Their involvement with the alcohol program was not discussed. Outlines for the telephone contacts and unit commander letters were supplied by Rand in a followup letter confirming the survey arrangements. (These materials are reproduced in Appendix D.)

These procedures were highly successful in eliciting the cooperation of the study participants and their unit commanders. Typically, the Rand representative administered the followup questionnaire to a group of as many as 10 persons during the morning of the site visit. In a few cases, make-up sessions were added during the afternoon to accommodate respondents who could not be present for the morning session or who requested individual administrations. All survey sessions were conducted in private rooms, normally at Social Actions, and attendance was limited to the respondents and the Rand representative. In administering the survey, the representative assured the study participants that their responses were confidential. He explained that it had been necessary to keep a list of the persons who completed the initial questionnaire for the purpose of locating them for the followup assessment, and indicated that this list would be destroyed at the conclusion of the study. The representative next asked the respondents to read the Privacy Act statement on the cover page of the survey booklet and, then, to begin working. He remained in the room to answer questions during the one-hour survey period. (The administration instructions are reproduced in Appendix D.)

Rand administration of the followup survey was supplemented with Social Actions and by-mail administration procedures when required. The Social Actions procedure was used for the few persons who were unavoidably absent during the site visits to their bases and for individuals stationed at installations with very small numbers of study participants. The Social Actions chiefs at these locations were personally contacted to discuss the necessary presurvey arrangements, which corresponded to those used in the Rand administration. The by-mail procedure was used for persons who had separated from the Air Force during the course of the study. The survey packages for the two procedures included administration instructions for Social Actions personnel as required, a summary of the information normally provided on site by the Rand representative, instructions concerning the proper procedures

<sup>1</sup>In the interest of saving research costs and of protecting the confidentiality of study participation, a Social Action administration procedure for the followup questionnaire was initiated during 1978 on a trial basis. After a period of several months, this procedure was discontinued because of a low response rate.

for completing and returning the questionnaire, and, in the case of separated personnel, a check for \$10 provided as compensation for completion of the survey instrument. (See Appendix D.)

The sizes of the survey samples obtained at admission and followup are shown in Table A.3. During the initial (admission) assessment period, base personnel at the 20 study locations administered questionnaires to 1115 respondents. This represents approximately 15 percent of all persons entering the alcohol rehabilitation program during this period. An additional, small group of 94 individuals refused to complete the questionnaire and were excused from the study.

Table A.3

ADMINISTRATION RESULTS FOR ADMISSION  
AND FOLLOWUP SURVEYS

Item	Number of Cases
Admission Survey <sup>a</sup>	
Refusals	94
Administered questionnaires	1115
Followup Survey <sup>b</sup>	
Total active-duty personnel	707
Available active-duty personnel	667
Completed questionnaires	618
Total separated personnel	384
Available separated personnel	240
Completed questionnaires	167
Response rates (completed, as percentage of available)	Active duty 92.7% Separated 69.6%

<sup>a</sup>After the initial survey, 24 questionnaires were voided because they had not been administered within a week of admission as requested. These individuals were not followed up, reducing the sample for the second survey from 1115 to 1091.

<sup>b</sup>In certain cases, individuals who were followed up were later excluded from the data analyses. These were persons with partially completed admission questionnaires, persons completing survey booklets containing errors, and, in the main, persons whose treatment histories were not forwarded to Rand. Thus, in total, 1033 persons were included in the admission analyses and 756—representing 597 active-duty and 159 separated personnel—were included in the followup analyses.

At followup, valid base addresses were obtained for 667 persons who remained on active duty; 92.7 percent of them subsequently completed the second questionnaire. Locating the respondents who separated from the Air Force proved more difficult. Completed followup questionnaires were returned by 167 of the 240 individuals with valid home addresses, representing a satisfactory response rate of 69.6 percent. Thus, individuals who left the Air Force, as well as those remaining on active duty, were generally cooperative. Moreover, it is unclear what proportion of the separated personnel not returning questionnaires actually received them. Very few individuals—only 2 percent of the followup sample—returned the survey instrument marked "refused," the indicated procedure for persons choosing not to participate.

The major demographic characteristics of the admission sample are shown in Table A.4. As noted earlier, Alcohol Rehabilitation Center entrants were deliberately oversampled to per-

Table A.4

**DEMOGRAPHIC CHARACTERISTICS OF ADMISSION SAMPLE  
AND AIR FORCE POPULATION<sup>a</sup>**

Characteristic	Percent with Characteristic	
	Admission Sample	Air Force Population
Pay Grade		
O4-O6	0.9	6.5
O1-O3	2.3	10.5
E7-E9	5.8	8.3
E5-E6	29.4	26.4
E1-E4	61.6	48.3
Sex		
Male	95.8	93.1
Female	4.2	6.9
Marital Status		
Currently married	39.7	66.9
Not married	60.3	33.1

<sup>a</sup>The admission sample data have been weighted to reflect the proper balance of ARC and local rehabilitation program entrants. The Air Force population figures are for 30 June 1977, concurrent with the admission survey.

mit separate analysis of this group; therefore, the percentages shown for the admission sample in Table A.4 have been weighted to reflect the proper balance of local rehabilitation (Social Actions) and Alcohol Rehabilitation Center clients. (See Appendix F.) The corresponding percentage of the total Air Force population having each characteristic is also indicated.

The data show that, in comparison with the total Air Force population, alcohol program clients comprise a more junior, less married population. This finding is consistent with results from the Prevalence Study, which found higher problem rates for these groups. In particular, the percentage of persons entering the program during the initial assessment period who held pay grades E1-E4 was considerably higher than the corresponding percentage in the total Air Force population. In contrast, the percentage of officers in the admission sample was much lower than the percentage of officers throughout the Air Force. The officer data are also consistent with the Prevalence Study results, which indicated that pay grades O1-O6 comprised less than 5 percent of the persons experiencing alcohol problems during the comparable period. The proportion of rehabilitation program entrants in grades E5-E9 was similar to that in grades E5-E9 throughout the Air Force.

The data show that the proportions of males and females among program entrants were comparable to the proportions in the general Air Force population. However, they indicate that unmarried personnel comprised 60.3 percent of the entrants, compared with 33.1 percent of the total Air Force. The higher proportion of single personnel in the admission sample reflects several factors: (1) Because clients are younger than the general Air Force population, they are less likely to have married. (2) Among clients who have married, legal separation and divorce are more common than in the general population. (3) As noted above, alcohol problems are more prevalent among persons not currently married than among married personnel.

## **Appendix B**

### **ADMISSION QUESTIONNAIRE**

This appendix contains the questionnaire administered to clients upon admission to the alcohol program at one of the 20 study locations. The pages have been renumbered for inclusion here. Alcohol Rehabilitation Centers are referred to by their previous title, "Alcohol Treatment Centers."



USAF SCN77-108

Case #: 

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THE RAND CORPORATION  
AIR FORCE ALCOHOL PROGRAM STUDY

Client Questionnaire

You have been asked to participate in a scientific study being conducted by The Rand Corporation about drinking practices in the Air Force. The principal purpose of the study is to evaluate how Social Actions Programs (Hospital Alcohol Treatment Centers) affect the people they serve. To help Rand learn about this issue, you are being asked to complete the attached questionnaire; you may be contacted again in about six months as part of the same study.

Any answers you give will be strictly confidential and will be used for research purposes only. Your name will not be associated with this form and no information you give will be seen or used by the Air Force.

Please answer all the questions as frankly as you can. When you have finished the form, check through it to be sure you have answered all the questions that pertain to you. Then place the form in the post-paid envelope provided. Seal the envelope and MAIL IT IMMEDIATELY TO THE RAND CORPORATION. This procedure will ensure that the Air Force will not see the information you give.

PRIVACY STATEMENT

In accordance with paragraph 30, AFR 12-35, Air Force Privacy Program, the following information about this survey is provided:

- a. Authority. 10 U.S.C., 8012, Secretary of the Air Force: Powers and Duties, Delegation by.
- b. Principal purpose. The survey is being conducted to collect opinions and behavioral information relating to current and future Air Force policies and programs.
- c. Routine use. The survey data will be converted to statistical information for use by The Rand Corporation and the Air Force in evaluating and planning programs and policies.
- d. Participation in this survey is voluntary.
- e. No adverse action of any kind may be taken against any individual who elects not to participate in this survey.

## INSTRUCTIONS

READ EACH QUESTION CAREFULLY.

CIRCLE THE NUMBER OF THE ONE ANSWER THAT MOST CLOSELY FITS YOU AND FOLLOW ANY INSTRUCTIONS NEXT TO THE NUMBER YOU CIRCLED, WHICH TELL YOU TO GO TO ANOTHER QUESTION OR ANOTHER PAGE.

Example:

1. DO YOU SMOKE CIGARETTES?

Yes. . . . . 1 ➡ Answer A  
No . . . . . 2 ➡ Go to question 2

A. ON THE AVERAGE, ABOUT HOW MANY PACKS A DAY DO YOU SMOKE?

(Circle one)

Less than 1 pack . . . . . 1  
About 1 pack . . . . . 2  
About 2 packs. . . . . 3  
More than 2. . . . . 4

IF THERE ARE NO INSTRUCTIONS AFTER YOUR ANSWER, GO TO THE VERY NEXT QUESTION.

SOMETIMES, DEPENDING ON THE ANSWER YOU CIRCLED, YOU WILL ALSO BE ASKED TO WRITE IN ANOTHER ANSWER BEFORE YOU GO ON TO THE NEXT QUESTION.

Example:

2. HOW OFTEN HAVE YOU HAD A COUGHING FIT FROM SMOKING?

Never happened to me . . . . . 01 }  
Has happened, but not in the }  
past year . . . . . 02 } Go to question 3

IN THE PAST YEAR,

Happened once or twice . . . . . 03 }  
3 to 11 times. . . . . 04 }  
1 to 12 times a month . . . . . 05 } Answer A  
Every day or nearly every day. . . . . 06

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOU SMOKED YOUR LAST CIGARETTE?

Number of times: 25

CARD 01

7-8/01

Case #

--	--	--	--	--	--

1-6/  
DO NOT  
WRITE IN  
THIS SPACE  
9-14/

Please enter today's date:

MONTH / DAY / YEAR

1. WHAT IS YOUR PERMANENT DUTY STATION?

Air Force Base

State (or country if not in U.S.)

15-17/

2. HOW LONG HAVE YOU BEEN AT YOUR PRESENT DUTY STATION? Count only the time in your present tour.

Number of MONTHS at present duty station: \_\_\_\_\_

18-20/

3. WHAT IS YOUR DUTY AFSC?

Prefix 

--	--	--	--	--

 Suffix

Officer

Enlisted

21-27/

4. WHAT IS THE NAME OF YOUR CURRENT MAJOR COMMAND?

Current major command: \_\_\_\_\_

28-29/

CARD 01

5. HOW MANY PEOPLE - OFFICERS, AIRMEN AND CIVILIANS - DO YOU NORMALLY SUPERVISE? Count ONLY those who report directly to you and whose performance ratings or efficiency reports you write.

DO NOT  
WRITE IN  
THIS SPACE

Number of people supervised: \_\_\_\_\_

32-32

6. ARE YOU CURRENTLY SERVING IN YOUR FIRST TERM OF ENLISTMENT?

(Circle one)

Yes . . . . . 1  
 No . . . . . 2  
 Does not apply, I am an officer . . . 3

33/

7. DO YOU INTEND TO REENLIST WHEN YOUR PRESENT TERM OF SERVICE IS COMPLETED?

(Circle one)

Yes . . . . . 1  
 Undecided, but probably yes . . . . 2  
 Undecided, but probably no. . . . . 3  
 Will retire at end of present term. . 4  
 Does not apply, I am an officer . . . 5

34.

8. DO YOU EXPECT TO STAY IN THE AIR FORCE UNTIL RETIREMENT?

(Circle one)

Definitely yes. . . . . 1  
 Probably yes . . . . . 2  
 Probably not . . . . . 3  
 Definitely not . . . . . 4

35/

CARD 01

9. WHAT IS YOUR PRESENT ACTIVE DUTY PAY GRADE?

O- \_\_\_\_\_  
or  
E- \_\_\_\_\_

DO NOT  
WRITE IN  
THIS SPACE

36-37/

33-39/

10. HOW LONG HAVE YOU BEEN ON ACTIVE DUTY? If you had a break in service, count current time and time in previous tours.

Active Duty - Years \_\_\_\_\_  
and/or  
Months \_\_\_\_\_

40-41/

42-43/

11. WHAT WAS YOUR LAST OVERALL APR/OER RATING?

APR/OER Rating: \_\_\_\_\_

44-45/

12. WHAT IS YOUR MARITAL STATUS?

(Circle one)

Married . . . . . 1  
Separated . . . . . 2  
Divorced . . . . . 3  
Widowed . . . . . 4  
Never married . . . . . 5

46/

13. HOW MANY DEPENDENTS DO YOU HAVE? Do not include yourself.

Number of dependents: \_\_\_\_\_  
(If none write "0")

47-48/

CARD 01

DO NOT  
WRITE IN  
THIS SPACE

14. WHAT TYPE OF QUARTERS DO YOU HAVE AT PRESENT?

(Circle one)

- On base with dependents . . . . . 1  
On base barracks or nondependent  
quarters. . . . . 2  
Off base government housing . . . . . 3  
Off base civilian housing . . . . . 4

49

15. IS YOUR SPOUSE WITH YOU AT YOUR PRESENT DUTY STATION?

(Circle one)

- Yes, my spouse is with me . . . . . 1  
No, my spouse is not with me. . . . . 2  
I am not currently married. . . . . 3

50

16. HOW MANY OVERSEAS ASSIGNMENTS OF A MONTH OR LONGER HAVE YOU HAD SINCE YOU HAVE BEEN IN THE AIR FORCE? Include Alaska and Hawaii. Count your present tour if you are now overseas.

Number of overseas assignments: \_\_\_\_\_  
(If none write "0")

51-52

17. HOW MANY ISOLATED OR REMOTE TOURS HAVE YOU HAD SINCE YOU ENTERED THE AIR FORCE?

Number of isolated tours: \_\_\_\_\_  
(If none write "0")

53-54

CARD 01

18. HOW MANY TIMES HAVE YOU BEEN STATIONED IN A PLACE WHERE YOU WERE SEPARATED FROM YOUR SPOUSE FOR 3 MONTHS OR MORE?

Number of times: \_\_\_\_\_  
(If none write "0")

I have not been married while in  
the Air Force . . . . . 99

DO NOT  
WRITE IN  
THIS SPACE

55-56

19. WERE YOU STATIONED IN SOUTH VIETNAM, GUAM, THAILAND, OR ANOTHER SOUTHEAST ASIAN COUNTRY DURING THE VIETNAM WAR? Include TDYs.

(Circle all that apply)

Yes, South Vietnam . . . . . 1	} Answer A and B	57/
Yes, Guam . . . . . 2		58/
Yes, Thailand . . . . . 3		59/
Yes, other Southeast Asian Country . (indicate name of the country: _____) . . 4		60/
No, none of the above . . . . . 5	Go to question 20	61/

- A. ALTOGETHER, HOW MANY MONTHS DID YOU SPEND IN THOSE LOCATIONS? Include all TDY and PCS time.

Total number of months  
in those locations: \_\_\_\_\_

62-64/

- B. WERE YOU IN A COMBAT ROLE OR A NONCOMBAT ROLE?

(Circle one)

Combat role . . . . . 1	65/
Noncombat role . . . . . 2	
Both combat and noncombat roles . . 3	

CARD 10

20. HAVE YOU EVER BEEN STATIONED ON "STANDING ALERT"?

(Circle one)

Yes. . . . . 1 ➡ Answer A  
No . . . . . 2 ➡ Go to question 21

DO NOT  
WRITE IN  
THIS SPACE

9.

A. HOW MANY TIMES HAVE YOU BEEN ON "STANDING ALERT" IN THE PAST YEAR?

Number of times in the past year: \_\_\_\_  
(If none write "0")

10-11

21. HAVE YOU EVER BEEN STATIONED ON LONG DUTY SHIFTS IN MISSILE SITES - WHERE YOU'VE BEEN DOWN IN THE HOLE FOR SEVERAL DAYS AT A TIME?

(Circle one)

Yes. . . . . 1 ➡ Answer A  
No . . . . . 2 ➡ Go to question 22

12

A. HOW MANY TIMES HAVE YOU BEEN ON LONG DUTY SHIFTS IN MISSILE SITES DURING THE PAST YEAR?

Number of times in past year: \_\_\_\_  
(If none write "0")

13-14

22. IN THE PAST YEAR, HOW MANY TIMES HAVE YOU BEEN ON TDY?

Number of times on TDY: \_\_\_\_  
(If none write "0")

15-16



23. HAVE YOU EVER BEEN DEMOTED?

(Circle one)

Yes. . . . . 1 ➡ Answer A

No . . . . . 2 ➡ Go to question 24

DO NOT  
WRITE IN  
THIS SPACE

17/

A. WAS THE REASON FOR YOUR DEMOTION RELATED TO DRINKING?

(Circle one)

Yes. . . . . 1

No . . . . . 2

18/

24. HAVE YOU EVER RECEIVED A MEDICAL AND/OR DISHONORABLE DISCHARGE?

(Circle all that apply)

Yes, medical . . . . . 1

Yes, dishonorable. . . . . 2

No, neither. . . . . 3

19/

20/

21/

25. HOW OLD WERE YOU WHEN YOU JOINED THE AIR FORCE?

Age when you joined the Air Force \_\_\_\_

22-23/

26. HOW OLD ARE YOU NOW?

Age: \_\_\_\_\_

24-25/

27. ARE YOU MALE OR FEMALE?

(Circle one)

Male. . . . . 1

Female. . . . . 2

26/

28. HOW MUCH DO YOU WEIGH?

Pounds: \_\_\_\_\_

DO NOT  
WRITE IN  
THIS SPACE

27-29.

29. WHICH ONE OF THE FOLLOWING DO YOU CONSIDER YOURSELF?

(Circle one)

- American Indian. . . . . 1
- Spanish background (Mexican-American,  
Puerto Rican, Cuban, etc.) . . . . 2
- White (but not Spanish background) . 3
- Black. . . . . 4
- Oriental-American. . . . . 5
- Other. . . . . 6

30/

30. WHAT IS YOUR HIGHEST LEVEL OF EDUCATION AT THIS TIME?  
Include accepted GED credits.

(Circle one)

- No high school. . . . . 01
- Some high school. . . . . 02
- GED certificate or high school  
equivalency . . . . . 03
- High school graduate. . . . . 04
- One or two years of college or  
vocational school (include  
Associate Degree) . . . . . 05
- More than two years . . . . . 06
- College degree (BA, BS, or  
equivalent) . . . . . 07
- Graduate study but no graduate  
degree. . . . . 08
- Master's degree . . . . . 09
- Doctor's degree (Ph.D., M.D.,  
LLB, Ed.D., etc.) . . . . . 10

31-32

31. WHERE DID YOU LIVE DURING MOST OF THE TIME WHILE YOU WERE GROWING UP, BEFORE YOU WERE 16 YEARS OLD?

DO NOT  
WRITE IN  
THIS SPACE

State (or Country  
if not in U.S.): \_\_\_\_\_

33-35/

32. WHAT RELIGION WAS YOUR FAMILY WHILE YOU WERE GROWING UP?

(Circle one)

- |                                   |   |   |                   |
|-----------------------------------|---|---|-------------------|
| Protestant. . . . .               | 1 | ▶ | Answer A          |
| Roman Catholic. . . . .           | 2 | } | Go to question 33 |
| Jewish. . . . .                   | 3 |   |                   |
| None, Agnostic, Atheist . . . . . | 4 |   |                   |
| Other: _____                      | 5 |   |                   |

36/

- A. WHAT DENOMINATION OR CHURCH WAS THAT?

37-38/

33. UNTIL THE AGE OF 16, WHO DID YOU LIVE WITH MOST OF THE TIME?

(Circle all that apply)

- |                                         |   |     |
|-----------------------------------------|---|-----|
| Natural father. . . . .                 | 1 | 39/ |
| Natural mother. . . . .                 | 2 | 40/ |
| Step-mother . . . . .                   | 3 | 41/ |
| Step-father . . . . .                   | 4 | 42/ |
| Other adult relative - male . . . . .   | 5 | 43/ |
| Other adult relative - female . . . . . | 6 | 44/ |
| Other . . . . .                         | 7 | 45/ |

34. WHEN YOU WERE GROWING UP, UNTIL THE AGE OF 16, WAS YOUR FATHER OR STEPFATHER EVER ON ACTIVE DUTY IN THE MILITARY - THAT IS THE ARMY, NAVY, MARINES, OR AIR FORCE?

DO NOT  
WRITE IN  
THIS SPACE

(Circle all that apply)

- |                          |   |   |                   |     |
|--------------------------|---|---|-------------------|-----|
| Yes, Father. . . . .     | 1 | ➡ | Answer A          | 46/ |
| Yes, stepfather. . . . . | 2 | ➡ | Answer A          | 47/ |
| No . . . . .             | 3 | ➡ | Go to question 35 | 48/ |
| Don't know . . . . .     | 4 | ➡ | Go to question 35 | 49/ |

- A. WAS YOUR FATHER OR STEPFATHER ON ACTIVE DUTY FOR FIVE YEARS OR MORE WHILE YOU WERE GROWING UP?

(Circle all that apply)

- |                                                                      |   |     |
|----------------------------------------------------------------------|---|-----|
| Yes, father was on active duty<br>5 years or more . . . . .          | 1 | 50/ |
| Yes, stepfather was on active<br>duty 5 years or more. . . . .       | 2 | 51/ |
| No, father was on active duty for<br>less than 5 years . . . . .     | 3 | 52/ |
| No, stepfather was on active duty<br>for less than 5 years . . . . . | 4 | 53/ |
| Don't know. . . . .                                                  | 5 | 54/ |

35. WHEN YOU WERE GROWING UP, HOW WOULD YOU DESCRIBE YOUR NATURAL FATHER'S DRINKING?

(Circle one)

- |                                                 |   |     |
|-------------------------------------------------|---|-----|
| He drank occasionally . . . . .                 | 1 | 55/ |
| He drank frequently . . . . .                   | 2 |     |
| He drank heavily. . . . .                       | 3 |     |
| He had a drinking problem . . . . .             | 4 |     |
| He didn't drink at all. . . . .                 | 5 |     |
| Did not live with my natural<br>father. . . . . | 6 |     |

CARD 02

36. WHEN YOU WERE GROWING UP, HOW WOULD YOU DESCRIBE YOUR STEPFATHER'S DRINKING?

(Circle one)

- He drank occasionally . . . . . 1
- He drank frequently . . . . . 2
- He drank heavily. . . . . 3
- He had a drinking problem . . . . . 4
- He didn't drink at all. . . . . 5
- Did not live with a stepfather. . . . 6

DO NOT  
WRITE IN  
THIS SPACE

56/

37. WHEN YOU WERE GROWING UP, HOW WOULD YOU DESCRIBE YOUR NATURAL MOTHER'S DRINKING?

(Circle one)

- She drank occasionally. . . . . 1
- She drank frequently. . . . . 2
- She drank heavily . . . . . 3
- She had a drinking problem. . . . . 4
- She didn't drink at all . . . . . 5
- Did not live with my natural mother . 6

57/

38. IF YOU ARE MARRIED, HOW WOULD YOU DESCRIBE YOUR SPOUSE'S DRINKING?

(Circle one)

- Drinks occasionally. . . . . 1
- Drinks frequently . . . . . 2
- Drinks heavily . . . . . 3
- Has a drinking problem . . . . . 4
- Doesn't drink at all . . . . . 5
- I am not currently married . . . . . 6

58/

CARD 02

DO NOT  
WRITE IN  
THIS SPACE

## 39. IN GENERAL, HOW WELL ARE THINGS GOING ALONG IN THESE AREAS OF YOUR LIFE AT THE PRESENT TIME?

(Circle one for each item)

	<u>VERY WELL</u>	<u>FAIRLY WELL</u>	<u>NOT VERY WELL</u>	
A. Your friendships and social life?	1	2	3	59/
B. Your job?	1	2	3	60/
C. Your money or finances?	1	2	3	61/
D. Your health?	1	2	3	62/
E. Getting along with your co-workers?	1	2	3	63/
F. Getting along with your supervisor?	1	2	3	64/
IF MARRIED:				
G. Your marriage?	1	2	3	65/
IF CHILDREN:				
H. Your relationship with your children?	1	2	3	66/

## 40. HOW SATISFIED ARE YOU WITH YOUR MILITARY JOB?

(Circle one)

Very satisfied. . . . . 1  
 Satisfied . . . . . 2  
 Neither satisfied nor  
 dissatisfied. . . . . 3  
 Dissatisfied. . . . . 4  
 Very dissatisfied . . . . . 5

CARD 03

41. HOW SATISFIED ARE YOU WITH YOUR LOCATION AND ASSIGNMENT?

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

Very satisfied. . . . . 1  
 Satisfied . . . . . 2  
 Neither satisfied nor dissatisfied. . 3  
 Dissatisfied. . . . . 4  
 Very dissatisfied . . . . . 5

9/

Here are some questions about your close friends.

42. ABOUT HOW MANY CLOSE FRIENDS DO YOU HAVE?

Number of close friends: \_\_\_\_\_  
 (If none write "0")

10-11/

43. HOW MANY OF THESE CLOSE FRIENDS ARE ALSO IN YOUR UNIT OR SQUADRON?

Number of close friends in  
 unit or squadron: \_\_\_\_\_  
 (If none write "0")

12-13/

44. HOW MANY OF ALL YOUR CLOSE FRIENDS ARE HEAVY DRINKERS, AT THE PRESENT TIME?

Number who are heavy drinkers: \_\_\_\_\_  
 (If none write "0")

14-15/

45. HOW MANY OF ALL YOUR CLOSE FRIENDS DO NOT DRINK AT ALL, AT THE PRESENT TIME?

Number who do not drink at all: \_\_\_\_\_  
 (If none write "0")

16-17/

CARD 03

The following questions are about your own drinking.

DO NOT  
WRITE IN  
THIS SPACE

46. IF YOU EVER DRANK FREQUENTLY OR HEAVILY, ABOUT HOW OLD WERE YOU WHEN YOU STARTED DRINKING THAT WAY?

Age: \_\_\_\_\_ Answer A

18-19

(OR)

I never drank frequently or  
heavily . . . . . 99 Circle '99' and  
go to question 48  
on page 16

- A. WHAT WOULD YOU SAY WAS THE ONE MOST IMPORTANT REASON THAT YOU STARTED DRINKING FREQUENTLY OR HEAVILY?

(Circle only the one most important reason.)

- My friends or coworkers drank  
a lot . . . . . 01  
I liked the effect or taste . . . . . 02  
My family members drank a lot . . . . . 03  
There was a death in my family. . . . . 04  
I had family or marital problems. . . . . 05  
I had job problems. . . . . 06  
I had financial problems. . . . . 07  
I was in combat and under  
pressure or stress. . . . . 08  
Because of problems associated  
with special Air Force  
assignments . . . . . 09  
I was on a remote or unaccompanied  
tour. . . . . 10  
I was under other pressures,  
tension or stress not related to  
my special Air Force assignment . . . . . 11  
I was unhappy or depressed. . . . . 12  
I was lonely, isolated, or bored. . . . . 13  
Drinking became a habit . . . . . 14  
I felt sick if I cut down my  
drinking . . . . . 15  
Because of my nerves in general . . . . . 16  
Other reasons (Explain): \_\_\_\_\_ 17  
\_\_\_\_\_ 18

20-21

22-23

24-25



47. DO YOU FEEL THAT YOUR HEAVY OR FREQUENT DRINKING EVER BECAME  
A DRINKING PROBLEM?

(Circle one)

Yes . . . . .	1	} <div style="border: 1px solid black; padding: 2px; display: inline-block;">Go to Question 48 on page 16</div>
No . . . . .	2	
Not sure . . . . .	3	

Answer A & B

- A. HOW OLD WERE YOU WHEN YOUR DRINKING PROBLEM BEGAN?

Age: \_\_\_\_\_

- B. WHAT WOULD YOU SAY WAS THE ONE MOST IMPORTANT REASON  
THAT YOU BEGAN PROBLEM DRINKING?

(Circle only the one most important reason.)

My friends or coworkers drank a lot. . . . .	01
I liked the effect or taste. . . .	02
My family members drank a lot. . .	03
There was a death in my family . .	04
I had family or marital problems .	05
I had job problems . . . . .	06
I had financial problems . . . . .	07
I was in combat and under pressure or stress . . . . .	08
Because of problems associated with special Air Force assignments. . . . .	09
I was on a remote or unaccompanied tour . . . . .	10
I was under other pressures, tension or stress not related to my Air Force job or assignment . . . . .	11
I was unhappy or depressed . . . .	12
I was lonely, isolated, or bored .	13
Drinking became a habit. . . . .	14
I felt sick if I cut down my drinking . . . . .	15
Because of my nerves in general. .	16
Other reasons (Explain): _____	17

18

CARD 03

DO NOT  
WRITE IN  
THIS SPACE

26/

27-28/

29-30/

31-32/

33-34/

48. HOW WOULD YOU DESCRIBE YOUR DRINKING DURING THE PAST SEVERAL MONTHS?

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

Abstaining. . . . . 1  
Occasional light drinking . . . . . 2  
Frequent drinking . . . . . 3  
Heavy drinking. . . . . 4  
Problem drinking. . . . . 5  
Alcoholic drinking. . . . . 6

35

49. HOW WOULD YOU DESCRIBE YOUR DRINKING ABOUT A YEAR AGO?

(Circle one)

Abstaining. . . . . 1  
Occasional light drinking . . . . . 2  
Frequent drinking . . . . . 3  
Heavy drinking. . . . . 4  
Problem drinking. . . . . 5  
Alcoholic drinking. . . . . 6

36

THE NEXT QUESTIONS ARE ABOUT THE 30 DAYS BEFORE YOUR LAST DRINK.

50. SO THAT IT WILL BE EASIER FOR YOU TO KEEP THAT PERIOD OF TIME IN MIND, LOOK AT THE CALENDAR BELOW.

- A. Circle the date you last drank an alcoholic beverage--either beer, wine, or liquor--even if it was only a little.
- B. Count back 30 days from the date of your last drink and circle that date.

1977

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
..... 1	..... 1 2 3 4 5	..... 1 2 3 4 5	..... 1 2	1 2 3 4 5 6 7	..... 1 2 3 4
2 3 4 5 6 7 8	6 7 8 9 10 11 12	6 7 8 9 10 11 12	3 4 5 6 7 8 9	8 9 10 11 12 13 14	5 6 7 8 9 10 11
9 10 11 12 13 14 15	13 14 15 16 17 18 19	13 14 15 16 17 18 19	10 11 12 13 14 15 16	15 16 17 18 19 20 21	12 13 14 15 16 17 18
16 17 18 19 20 21 22	20 21 22 23 24 25 26	20 21 22 23 24 25 26	17 18 19 20 21 22 23	22 23 24 25 26 27 28	19 20 21 22 23 24 25
23 24 25 26 27 28 29	27 28 .....	27 28 29 30 31 .....	24 25 26 27 28 29 30	29 30 31 .....	26 27 28 29 30
30 31 .....					
JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
..... 1 2	..... 1 2 3 4 5 6	..... 1 2 3	..... 1	..... 1 2 3 4 5	..... 1 2 3
3 4 5 6 7 8 9	7 8 9 10 11 12 13	4 5 6 7 8 9 10	2 3 4 5 6 7 8	6 7 8 9 10 11 12	4 5 6 7 8 9 10
10 11 12 13 14 15 16	14 15 16 17 18 19 20	11 12 13 14 15 16 17	9 10 11 12 13 14 15	13 14 15 16 17 18 19	11 12 13 14 15 16 17
17 18 19 20 21 22 23	21 22 23 24 25 26 27	18 19 20 21 22 23 24	16 17 18 19 20 21 22	20 21 22 23 24 25 26	18 19 20 21 22 23 24
24 25 26 27 28 29 30	28 29 30 31 .....	25 26 27 28 29 30 ..	23 24 25 26 27 28 29	27 28 29 30 .....	25 26 27 28 29 30 31
31 .....			30 31 .....		

C. Write the date of your last drink here: \_\_\_\_\_ (MONTH/DAY/YEAR)

D. Write the date 30 days before that here: \_\_\_\_\_ (MONTH/DAY/YEAR)

IN THE REST OF THE QUESTIONNAIRE, THE PHRASE "30 DAYS BEFORE YOUR LAST DRINK" WILL ALWAYS REFER TO THE TIME PERIOD ABOVE.

51. NOW, THINKING BACK OVER THE 30 DAYS BEFORE YOUR LAST DRINK, HOW OFTEN DID YOU DRINK BEER?

(Circle one)

- |                                                                     |   |                              |
|---------------------------------------------------------------------|---|------------------------------|
| Every day . . . . .                                                 | 1 | } Go to question 52          |
| Nearly every day . . . . .                                          | 2 |                              |
| 3-4 times a week . . . . .                                          | 3 |                              |
| Once or twice a week . . . . .                                      | 4 |                              |
| 2-3 times during the 30 days before my last drink . . . . .         | 5 |                              |
| Once during the 30 days before my last drink . . . . .              | 6 |                              |
| Didn't drink any beer in the 30 days before my last drink . . . . . | 7 | Go to question 54 on page 19 |

DO NOT  
WRITE IN  
THIS SPACE

37-42

43-48

49

52. WHEN YOU DRANK BEER DURING THE 30 DAYS BEFORE YOUR LAST DRINK, HOW MUCH BEER DID YOU DRINK ON A TYPICAL DAY?

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

- |                                      |    |
|--------------------------------------|----|
| 1 can (or bottle). . . . .           | 01 |
| 2 cans . . . . .                     | 02 |
| 3 cans (one quart) . . . . .         | 03 |
| 4 cans . . . . .                     | 04 |
| 5 cans (2 quarts). . . . .           | 05 |
| 6 cans . . . . .                     | 06 |
| 7 cans . . . . .                     | 07 |
| 8-11 cans (3 or 4 quarts). . . . .   | 08 |
| 12-17 cans (5 or 6 quarts) . . . . . | 09 |
| 18 or more cans (7 or more quarts) . | 10 |

50-52

53. HOW LARGE ARE THE CANS OR BOTTLES THAT YOU USUALLY DRINK?

(Circle one)

- |                                        |   |
|----------------------------------------|---|
| Standard 12 oz. cans or bottles. . . . | 1 |
| 16 oz. (half-quart) cans or bottles. . | 2 |
| 32 oz. (full quart) cans or bottles. . | 3 |
| Less than 12 oz. cans or bottles . . . | 4 |
| More than 32 oz. cans or bottles . . . | 5 |
| Don't drink cans or bottles of beer. . | 6 |

52

54. DURING THE 30 DAYS BEFORE YOUR LAST DRINK, HOW OFTEN DID YOU DRINK WINE?

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

- |                                                                       |   |                                                                                                |
|-----------------------------------------------------------------------|---|------------------------------------------------------------------------------------------------|
| Every day . . . . .                                                   | 1 | } <span style="border: 1px solid black; padding: 2px;">Go to question 55</span>                |
| Nearly every day . . . . .                                            | 2 |                                                                                                |
| 3-4 times a week . . . . .                                            | 3 |                                                                                                |
| Once or twice a week . . . . .                                        | 4 |                                                                                                |
| 2-3 times during the 30 days before<br>my last drink . . . . .        | 5 |                                                                                                |
| Once during the 30 days before my<br>last drink . . . . .             | 6 | } <span style="border: 1px solid black; padding: 2px;">Go to question 57<br/>on page 20</span> |
| Didn't drink any wine in the 30 days<br>before my last drink. . . . . | 7 |                                                                                                |

53/

55. WHEN YOU DRANK WINE DURING THE 30 DAYS BEFORE YOUR LAST DRINK, HOW MUCH WINE DID YOU DRINK ON A TYPICAL DAY?

(Circle one)

- |                                                                    |    |
|--------------------------------------------------------------------|----|
| 1 wine glass (4 oz.) . . . . .                                     | 01 |
| 2 wine glasses . . . . .                                           | 02 |
| 3 wine glasses (12 oz. - about half<br>a fifth or bottle). . . . . | 03 |
| 4 wine glasses . . . . .                                           | 04 |
| 5 wine glasses . . . . .                                           | 05 |
| 6 wine glasses (24 oz. - about one<br>fifth or bottle). . . . .    | 06 |
| 7 wine glasses . . . . .                                           | 07 |
| 8-11 wine glasses . . . . .                                        | 08 |
| 12 wine glasses (48 oz. - about<br>two fifths) . . . . .           | 09 |
| More than 12 wine glasses or more<br>than two fifths . . . . .     | 10 |

54-55/

56. DURING THIS PERIOD, DID YOU USUALLY DRINK A REGULAR TABLE WINE OR, WAS IT A FORTIFIED WINE SUCH AS SHERRY, VERMOUTH, PORT, OR DUBONNET?

(Circle one)

- A regular table wine. . . . . 1  
A fortified wine (like sherry,  
vermouth, port, or Dubonnet). . . . 2

DO NOT  
WRITE IN  
THIS SPACE

56/

57. DURING THE 30 DAYS BEFORE YOUR LAST DRINK, HOW OFTEN DID YOU DRINK HARD LIQUOR?

(Circle one)

- Every day. . . . . 1  
Nearly every day . . . . . 2  
3-4 times a week . . . . . 3  
Once or twice a week . . . . . 4 } Go to question 58  
2-3 times during the 30 days before  
my last drink . . . . . 5  
Once during the 30 days before my  
last drink . . . . . 6 }  
Didn't drink any hard liquor during  
the 30 days before my last drink . . 7 ➔ Go to question 60  
on page 22

57/

AD-A112 787

RAND CORP SANTA MONICA CA

F/G 6/5

EFFECTIVENESS AND COST OF ALCOHOL REHABILITATION IN THE UNITED --ETC(U)

DEC 81 B R ORVIS, D J ARMOR, C E WILLIAMS

F49620-82-C-0018

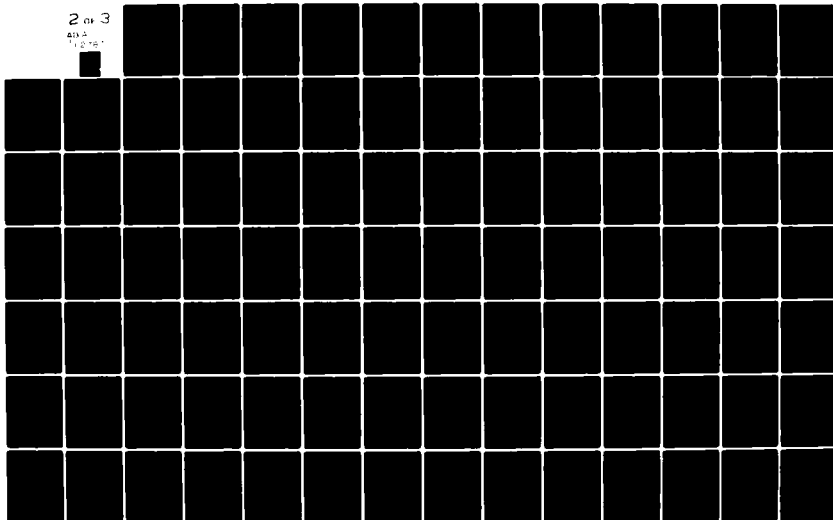
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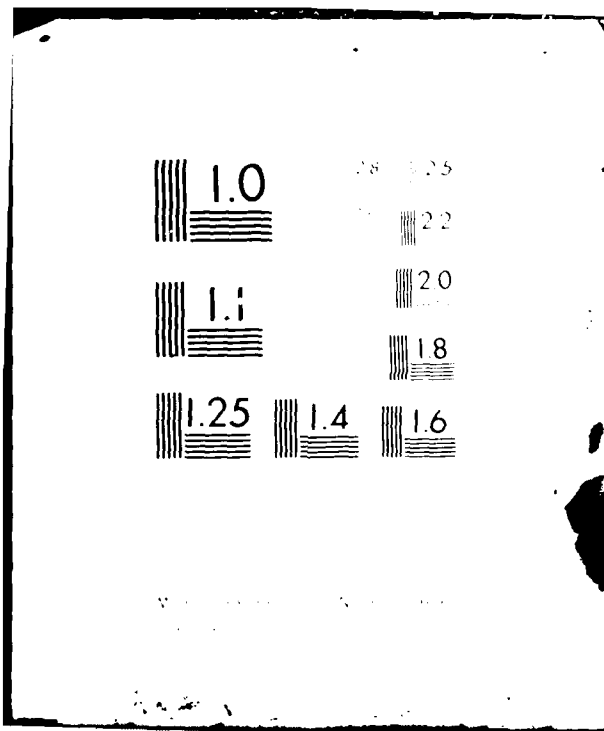
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2 of 3

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58. WHEN YOU DRANK HARD LIQUOR DURING THE 30 DAYS BEFORE YOUR LAST DRINK, HOW MUCH HARD LIQUOR DID YOU DRINK ON A TYPICAL DAY?

Mark either answer A (Number of drinks) or answer B (Number of ounces), whichever is easier for you to estimate.

A. Number of drinks

(OR)

B. Number of ounces

1 drink. . . . . 01  
 2 drinks . . . . . 02  
 3 drinks . . . . . 03  
 4 drinks . . . . . 04  
 5 drinks . . . . . 05  
 6 drinks . . . . . 06  
 7 drinks . . . . . 07  
 8-10 drinks . . . . 08  
 11-15 drinks . . . . 09  
 16-20 drinks . . . . 10  
 21 or more drinks. . 11

1 ounce. . . . . 01  
 2 ounces . . . . . 02  
 3 ounces . . . . . 03  
 4 ounces . . . . . 04  
 5 ounces . . . . . 05  
 6 ounces . . . . . 06  
 7 ounces . . . . . 07  
 8 ounces, Half Pint. 08  
 9-10 ounces . . . . 09  
 11-14 ounces . . . . 10  
 15-16 ounces,  
     One Pint . . . . . 11  
 17-24 ounces . . . . 12  
 25-32 ounces, 1 Fifth  
     to 1 Quart . . . . 13  
 More than 32 ounces,  
     More than 1 Quart. 14

58-59/  
 60-61/

59. IF YOU ANSWERED IN DRINKS: ABOUT HOW MANY OUNCES OF HARD LIQUOR ARE THERE IN YOUR AVERAGE DRINK?

(Circle one)

One ounce, One Shot. . . . . 1  
 1.25 ounces . . . . . 2  
 1.5 ounces, One jigger . . . . . 3  
 2 ounces . . . . . 4  
 3 ounces . . . . . 5  
 4 ounces . . . . . 6  
 5 or more ounces . . . . . 7

62/

The following question is about time in the past year when you drank a lot more than you did during the 30 days before your last drink.

CARD 23

60. NOW THINK ABOUT THE PAST YEAR--FROM TODAY BACK TO ONE YEAR AGO. DURING THE PAST YEAR HOW MANY MONTHS DID YOU DRINK A LOT MORE THAN YOU DRANK DURING THE 30 DAYS BEFORE YOUR LAST DRINK?

DO NOT  
WRITE IN  
THIS SPACE

Number of months: \_\_\_\_\_

If none, enter "0" and skip  
to question #61 on page 24.

63-64

- A. DURING THOSE MONTHS YOU WERE DRINKING MORE, ABOUT HOW MANY DAYS PER MONTH DID YOU DRINK ANY ALCOHOLIC BEVERAGE?

(Circle one)

Every day . . . . . 1  
Nearly every day . . . . . 2  
3-4 times a week. . . . . 3  
Once or twice a week. . . . . 4  
2-3 times a month . . . . . 5  
Once a month. . . . . 6

65/

- B. DURING THOSE MONTHS (when you were drinking more than you did in the 30 days before your last drink), HOW MUCH BEER DID YOU DRINK ON A TYPICAL DAY WHEN YOU DRANK BEER?

(Circle one)

1 can . . . . . 01  
2 cans. . . . . 02  
3 cans (one quart). . . . . 03  
4 cans. . . . . 04  
5 cans (2 quarts) . . . . . 05  
6 cans. . . . . 06  
7 cans. . . . . 07  
8-11 cans (3 or 4 quarts) . . . . . 08  
12-17 cans (5 or 6 quarts). . . . . 09  
18 or more cans (7 or more quarts). . . . . 10  
Did not drink beer. . . . . 11

66-67

CARD 03

- C. DURING THOSE MONTHS (when you were drinking more than you did in the 30 days before your last drink), HOW MUCH WINE DID YOU DRINK ON A TYPICAL DAY WHEN YOU DRANK WINE?

(circle one)

- 1 wine glass (4 oz.) . . . . . 01  
 2 wine glasses . . . . . 02  
 3 wine glasses (12 oz. - about half  
 a fifth or bottle) . . . . . 03  
 4 wine glasses . . . . . 04  
 5 wine glasses . . . . . 05  
 6 wine glasses (24 oz. - about one  
 fifth or bottle) . . . . . 06  
 7 wine glasses . . . . . 07  
 8-11 wine glasses . . . . . 08  
 12 wine glasses (48 oz. - about two  
 fifths) . . . . . 09  
 More than 12 wine glasses or more than  
 two fifths . . . . . 10  
 Did not drink wine . . . . . 11

DO NOT  
WRITE IN  
THIS SPACE

68-69/

- D. DURING THOSE MONTHS (when you were drinking more than you did in the 30 days before your last drink), HOW MUCH HARD LIQUOR DID YOU DRINK ON A TYPICAL DAY WHEN YOU DRANK HARD LIQUOR?

Mark either answer E (Number of drinks) or answer F (Number of ounces), whichever is easier for you to estimate.

E. Number of Drinks

(OR)

F. Number of Ounces

- 1 drink . . . . . 01  
 2 drinks . . . . . 02  
 3 drinks . . . . . 03  
 4 drinks . . . . . 04  
 5 drinks . . . . . 05  
 6 drinks . . . . . 06  
 7 drinks . . . . . 07  
 8-10 drinks . . . . . 08  
 11-15 drinks . . . . . 09  
 16-20 drinks . . . . . 10  
 21 or more drinks . . . . . 11  
 Did not drink hard liquor 12

- 1 ounce . . . . . 01  
 2 ounces . . . . . 02  
 3 ounces . . . . . 03  
 4 ounces . . . . . 04  
 5 ounces . . . . . 05  
 6 ounces . . . . . 06  
 7 ounces . . . . . 07  
 8 ounces, Half Pint . . . 08  
 9-10 ounces . . . . .  
 11-14 ounces . . . . .  
 15-16 ounces, One Pint . . 11  
 17-24 ounces . . . . . 12  
 25-32 ounces, 1 Fifth to  
 1 Quart . . . . . 13  
 More than 32 ounces, More  
 than 1 Quart . . . . . 14  
 Did not drink hard liquor 15

70-71/

72-73/

CARD 03

61. DURING THE PAST YEAR, WHICH OF THE FOLLOWING BEST DESCRIBES YOUR PATTERN OF DRINKING?

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

Drinking almost every day. . . . . 1

Mainly weekend drinking - or  
drinking on your days off. . . . . 2

Going on binges or drinking sprees . . 3

Some other pattern, Specify: \_\_\_\_\_

4

74.

62. HOW MANY BINGES OR SPREES DID YOU GO ON IN THE PAST YEAR?

Number of binges: \_\_\_\_\_

(If none write "0" and  
go to Question 63.)

75-76.

A: HOW LONG DID THE AVERAGE BINGE OR SPREE LAST?

Number of days: \_\_\_\_\_

77-78.

63. ABOUT HOW MANY TIMES IN THE PAST YEAR HAVE YOU BEEN HIGH ON  
ALCOHOL FOR MORE THAN 24 HOURS IN A ROW?

CARD 04

(Circle one)

5 or more times. . . . . 1

4 times. . . . . 2

3 times. . . . . 3

2 times. . . . . 4

Once . . . . . 5

Never in the past year, but some-  
time before that . . . . . 6

Never in my life . . . . . 7

2

CARD 04

64. DURING THE PAST YEAR, HOW OFTEN WOULD YOU SAY YOU HAVE HAD SOME ALCOHOLIC BEVERAGE IN EACH OF THE FOLLOWING SITUATIONS?

DO NOT  
WRITE IN  
THIS SPACE

(Circle one for each item)

	Every day or nearly <u>every day</u>	3 to 4 times a <u>week</u>	Once or twice a <u>week</u>	1 to 3 times a <u>month</u>	Less than once a month	Never	
a. At lunch on duty days	1	2	3	4	5	6	10/
b. At a bar or restaurant off base	1	2	3	4	5	6	11/
c. At a club, happy hour, or bar on base	1	2	3	4	5	6	12/
d. At my home or someone else's home (or quarters)	1	2	3	4	5	6	13/
e. Other places (parties, recrea- tion, etc.)	1	2	3	4	5	6	14/

CARD 04

65. IF YOU HAD JUST PARTICIPATED IN A HAPPY HOUR OR COCKTAIL PARTY THAT LASTED TWO HOURS, HOW MUCH COULD YOU DRINK AND FEEL SAFE DRIVING AN AUTOMOBILE?

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

0 drinks . . . . . 01  
1 drink (a shot, regular mixed  
drink) . . . . . 02  
a beer or glass of wine. . . . . 03  
2 drinks . . . . . 04  
3 drinks . . . . . 05  
4 drinks . . . . . 06  
5 drinks . . . . . 07  
6 drinks . . . . . 08  
7 drinks . . . . . 09  
8 drinks . . . . . 10  
9 drinks . . . . . 11  
10 drinks. . . . . 12  
More than 10 drinks. . . . . 13

15-16

66. THINK ABOUT YOUR IMMEDIATE SUPERVISOR - THE PERSON WHO MOST OFTEN CHECKS YOUR WORK OR REVIEWS YOUR PERFORMANCE ON THE JOB.

HOW OFTEN HAVE YOU HAD A DRINK WITH YOUR IMMEDIATE SUPERVISOR IN THE PAST YEAR?

(Circle one)

Every day or nearly every day. . . . . 1  
3-4 times a week . . . . . 2  
Once or twice a week . . . . . 3  
1-3 times a month. . . . . 4  
7-11 times in the past year. . . . . 5  
3-6 times in the past year . . . . . 6  
Once or twice in the past year . . . . . 7  
Never in the past year . . . . . 8

17

67. HOW MUCH WOULD YOU SAY YOUR IMMEDIATE SUPERVISOR DRINKS - MUCH MORE THAN YOU DO, SOMEWHAT MORE THAN YOU, ABOUT THE SAME AS YOU, SOMEWHAT LESS THAN YOU, OR MUCH LESS THAN YOU?

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

- Supervisor drinks much more than I do. 1  
Supervisor drinks somewhat more  
than I do. . . . . 2  
Supervisor drinks about the same as  
I do . . . . . 3  
Supervisor drinks somewhat less than  
I do . . . . . 4  
Supervisor drinks much less than I do. 5  
Supervisor doesn't drink at all. . . . 6  
Don't have any idea how much my  
supervisor drinks. . . . . 7

18/

Here are some experiences that people report in connection with drinking. Circle how often you have had this experience in the past year. Then fill in how many times it happened in the 30 days before your last drink.

68. I GOT HIGH ON ALCOHOL.

(Circle one)

- Never happened . . . . . 1  
Has happened, but not in the past  
year . . . . . 2

Go to question 69

IN THE PAST YEAR:

- Happened once or twice . . . . . 3  
3 to 6 times . . . . . 4  
7 to 11 times. . . . . 5  
1 to 3 times a month . . . . . 6  
Once or twice a week . . . . . 7  
3 or 4 times a week . . . . . 8  
Every day or nearly every day . . . 9

Answer A

19/

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

20-21/

CARD 04

DO NOT  
WRITE IN  
THIS SPACE

69. I WAS DRUNK.

(Circle one)

Never happened . . . . . 1  
 Has happened, but not in the  
 past year. . . . . 2

Go to question 70

22

IN THE PAST YEAR:

Happened once or twice . . . . . 3  
 3 to 6 times . . . . . 4  
 7 to 11 times. . . . . 5  
 1 to 3 times a month . . . . . 6  
 Once or twice a week . . . . . 7  
 3 or 4 times a week . . . . . 8  
 Every day or nearly every day. . . 9

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

23-24

70. I GOT INTO A FIGHT WHERE I HIT SOMEONE WHEN I WAS DRINKING.

(Circle one)

Never happened . . . . . 1  
 Has happened, but not in the  
 past year. . . . . 2

Go to question 71

25

IN THE PAST YEAR:

Happened once or twice . . . . . 3  
 3 to 6 times . . . . . 4  
 7 to 11 times. . . . . 5  
 1 to 3 times a month . . . . . 6  
 Once or twice a week . . . . . 7  
 3 or 4 times a week . . . . . 8  
 Every day or nearly every day. . . 9

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

26-27



CARD 04

71. I AWAKENED THE NEXT DAY NOT BEING ABLE TO REMEMBER SOME OF THE THINGS I HAD DONE WHILE DRINKING.

(Circle one)

Never happened . . . . . 1 }  
 Has happened, but not in the  
 past year. . . . . 2 }

Go to question 72

28/

IN THE PAST YEAR:

Happened once or twice . . . . . 3 }  
 3 to 6 times . . . . . 4 }  
 7 to 11 times. . . . . 5 }  
 1 to 3 times a month . . . . . 6 }  
 Once or twice a week . . . . . 7 }  
 3 or 4 times a week . . . . . 8 }  
 Every day or nearly every day. . . 9 }

Answer A

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

29-30/

72. I SKIPPED REGULAR MEALS WHILE I WAS DRINKING.

(Circle one)

Never happened . . . . . 1 }  
 Has happened, but not in the  
 past year. . . . . 2 }

Go to question 73

31/

IN THE PAST YEAR:

Happened once or twice . . . . . 3 }  
 3 to 6 times . . . . . 4 }  
 7 to 11 times . . . . . 5 }  
 1 to 3 times a month . . . . . 6 }  
 Once or twice a week . . . . . 7 }  
 3 or 4 times a week . . . . . 8 }  
 Every day or nearly every day. . . 9 }

Answer A

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

32-33/

73. I TOSSED DOWN SEVERAL DRINKS FAST TO GET A QUICKER EFFECT FROM THEM.

(Circle one)

Never happened . . . . . 1 }  
 Has happened, but not in . . . . . 2 }  
 the past year. . . . .

Go to question 74

34/

IN THE PAST YEAR:

Happened once or twice . . . . . 3 }  
 3 to 6 times . . . . . 4 }  
 7 to 11 times. . . . . 5 }  
 1 to 3 times a month . . . . . 6 }  
 Once or twice a week . . . . . 7 }  
 3 or 4 times a week. . . . . 8 }  
 Every day or nearly every day. . . 9 }

Answer A

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

35-36/

74. I TOOK A FEW QUICK DRINKS BEFORE GOING TO A PARTY TO MAKE SURE I HAD ENOUGH.

(Circle one)

Never happened . . . . . 1 }  
 Has happened, but not in . . . . . 2 }  
 the past year. . . . .

Go to question 75

37/

IN THE PAST YEAR:

Happened once or twice . . . . . 3 }  
 3 to 6 times . . . . . 4 }  
 7 to 11 times. . . . . 5 }  
 1 to 3 times . . . . . 6 }  
 Once or twice a week . . . . . 7 }  
 3 or 4 times a week. . . . . 8 }  
 Every day or nearly every day. . . 9 }

Answer A

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

38-39/

75. I TOOK A DRINK THE FIRST THING WHEN I GOT UP IN THE MORNING.

(Circle one)

- Never happened . . . . . 1 }  
Has happened, but not in  
the past year. . . . . 2 }

Go to question 76

DO NOT  
WRITE IN  
THIS SPACE

40/

IN THE PAST YEAR:

- Happened once or twice . . . . . 3 }  
3 to 6 times . . . . . 4 }  
7 to 11 times. . . . . 5 }  
1 to 3 times a month . . . . . 6 }  
Once or twice a month. . . . . 7 }  
3 or 4 times a week. . . . . 8 }  
Every day or nearly every day. . . 9 }

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR  
LAST DRINK?

Number of times: \_\_\_\_\_

41-42/

76. I COULD NOT STOP DRINKING BEFORE BECOMING INTOXICATED.

(Circle one)

- Never happened . . . . . 1 }  
Has happened, but not in  
the past year. . . . . 2 }

Go to question 77

43/

IN THE PAST YEAR:

- Happened once or twice . . . . . 3 }  
3 to 6 times . . . . . 4 }  
7 to 11 times. . . . . 5 }  
1 to 3 times a month . . . . . 6 }  
Once or twice a month. . . . . 7 }  
3 or 4 times a week. . . . . 8 }  
Every day or nearly every day. . . 9 }

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR  
LAST DRINK?

Number of times: \_\_\_\_\_

44-45/

77. I WAS SICK BECAUSE OF DRINKING (NAUSEA, VOMITING, SEVERE HEADACHE, ETC.).

(Circle one)

Never happened . . . . . 1  
Has happened, but not in  
the past year. . . . . 2

Go to question 78

IN THE PAST YEAR:

Happened once or twice . . . . . 3  
3 to 6 times . . . . . 4  
7 to 11 times. . . . . 5  
1 to 3 times a month . . . . . 6  
Once or twice a month. . . . . 7  
3 or 4 times a week. . . . . 8  
Every day or nearly every day. . . 9

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

78. I HAD THE "SHAKES" BECAUSE OF DRINKING.

(Circle one)

Never happened . . . . . 1  
Has happened, but not in  
the past year. . . . . 2

Go to question 79

IN THE PAST YEAR:

Happened once or twice . . . . . 3  
3 to 6 times . . . . . 4  
7 to 11 times. . . . . 5  
1 to 3 times a month . . . . . 6  
Once or twice a month. . . . . 7  
3 or 4 times a week. . . . . 8  
Every day or nearly every day. . . 9

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

DO NOT  
WRITE IN  
THIS SPACE

46

47-48

49

50-51

79. I HAD HALLUCINATIONS OR DTs BECAUSE OF DRINKING.

(Circle one)

Never happened . . . . . 1 }  
 Has happened, but not in  
 the past year. . . . . 2 }

Go to question 80

52/

IN THE PAST YEAR:

Happened once or twice . . . . . 3 }  
 3 to 6 times . . . . . 4 }  
 7 to 11 times. . . . . 5 }  
 1 to 3 times a month . . . . . 6 }  
 Once or twice a month. . . . . 7 }  
 3 or 4 times a week. . . . . 8 }  
 Every day or nearly every day. . . 9 }

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR  
 LAST DRINK?

Number of times: \_\_\_\_\_

53-54/

80. I HAD SEIZURES OR CONVULSIONS BECAUSE OF DRINKING.

(Circle one)

Never happened . . . . . 1 }  
 Has happened, but not in  
 the past year. . . . . 2 }

Go to question 81

55/

IN THE PAST YEAR:

Happened once or twice . . . . . 3 }  
 3 to 6 times . . . . . 4 }  
 7 to 11 times. . . . . 5 }  
 1 to 3 times a month . . . . . 6 }  
 Once or twice a month. . . . . 7 }  
 3 or 4 times a week. . . . . 8 }  
 Every day or nearly every day. . . 9 }

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR  
 LAST DRINK?

Number of times: \_\_\_\_\_

56-57/

Here are some things that have happened to people on their duty days.  
Circle how often they happened to you in the past year.

DO NOT  
WRITE IN  
THIS SPACE

81. I WAS ON DUTY, BUT DID NOT WORK AT MY NORMAL LEVEL OF PERFORMANCE  
BECAUSE OF DRINKING OR A HANGOVER.

(Circle one)

Never happened to me on a duty day. . 01 }  
Has happened, but not in the past  
year. . . . . 02 }

58-59/

Go to question 82

IN THE PAST YEAR:

Happened on 1 duty day. . . . . 03 }  
2 duty days . . . . . 04 }  
3 duty days . . . . . 05 }  
4-6 duty days . . . . . 06 }  
7-11 duty days. . . . . 07 }  
12-20 duty days . . . . . 08 }  
21-39 duty days . . . . . 09 }  
40 duty days or more. . . . . 10 }

Answer A

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR  
LAST DRINK?

Number of times: \_\_\_\_\_

60-61

82. I WAS LATE TO WORK OR LEFT EARLY BECAUSE OF DRINKING OR A HANGOVER.

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

- Never happened to me on a duty day. 01 }  
Has happened, but not in past year. 02 }

Go to question 83

62-63/

IN THE PAST YEAR:

- Happened on 1 duty day. . . . . 03 }  
2 duty days . . . . . 04 }  
3 duty days . . . . . 05 }  
4-6 duty days . . . . . 06 }  
7-11 duty days. . . . . 07 }  
12-20 duty days . . . . . 08 }  
21-39 duty days . . . . . 09 }  
40 duty days or more. . . . . 10 }

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

64-65/

83. I WAS OFF-DUTY BECAUSE OF DRINKING, A HANGOVER, OR ILLNESS CAUSED BY DRINKING.

(Circle one)

- Never happened to me on a duty day. 01 }  
Has happened, but not in past year. 02 }

Go to question 84

66-67/

IN THE PAST YEAR:

- Happened on 1 duty day. . . . . 03 }  
2 duty days . . . . . 04 }  
3 duty days . . . . . 05 }  
4-6 duty days . . . . . 06 }  
7-11 duty days. . . . . 07 }  
12-20 duty days . . . . . 08 }  
21-39 duty days . . . . . 09 }  
40 duty days or more. . . . . 10 }

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

68-69/

CARD 34

84. I HAD A DRINK 2 HOURS OR LESS BEFORE GOING ON DUTY.

(Circle one)

Never happened to me on a duty day. . 01 }  
 Has happened, but not in past year. . 02 }

Go to question 85

DO NOT  
WRITE IN  
THIS SPACE

70-71

IN THE PAST YEAR:

Happened on 1 duty day. . . . . 03 }  
 2 duty days . . . . . 04 }  
 3 duty days . . . . . 05 }  
 4-6 duty days . . . . . 06 }  
 7-11 duty days. . . . . 07 }  
 12-20 duty days . . . . . 08 }  
 21-39 duty days . . . . . 09 }  
 40 duty days or more. . . . . 10 }

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR  
LAST DRINK?

Number of times: \_\_\_\_\_

72-73

85. I WAS HIGH FROM DRINKING WHILE ON DUTY.

(Circle one)

Never happened to me on a duty day. . 01 }  
 Has happened, but not in past year. . 02 }

Go to question 86

74-75

IN THE PAST YEAR:

Happened on 1 duty day. . . . . 03 }  
 2 duty days . . . . . 04 }  
 3 duty days . . . . . 05 }  
 4-6 duty days . . . . . 06 }  
 7-11 duty days. . . . . 07 }  
 12-20 duty days . . . . . 08 }  
 21-39 duty days . . . . . 09 }  
 40 duty days or more. . . . . 10 }

Answer A

CARD 35

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR  
LAST DRINK?

Number of times: \_\_\_\_\_

9-10



86. I DRANK ON DUTY.

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

Never happened to me on a duty day. . 01  
 Has happened, but not in past year. . 02

Go to question 87

11-12/

IN THE PAST YEAR:

Happened on 1 duty day. . . . . 03  
 2 duty days . . . . . 04  
 3 duty days . . . . . 05  
 4-6 duty days . . . . . 06  
 7-11 duty days. . . . . 07  
 12-20 duty days . . . . . 08  
 21-39 duty days . . . . . 09  
 40 duty days or more. . . . . 10

Answer A

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR  
LAST DRINK?

Number of times: \_\_\_\_\_

13-14/

Next are some questions about drinking in the Air Force.

87. WHAT CLUB OR CLUBS DO YOU BELONG TO ON BASE?

1. \_\_\_\_\_

15-16/

2. \_\_\_\_\_

17-18/

3. \_\_\_\_\_

19-20/

Do not belong to a base club. . . . . 1

21/

CARD 10  
DO NOT  
WRITE IN  
THIS SPACE

88. ABOUT HOW OFTEN DO YOU GO TO A BASE CLUB TO DRINK AND SOCIALIZE?

(Circle one)

- Every day or nearly every day. . . . . 1
- 4-5 times per week . . . . . 2
- 2-3 times per week . . . . . 3
- once a week . . . . . 4
- Less than once per week. . . . . 5
- Less than once per month . . . . . 6
- Have never been to a base club . . . . 7

22

89. IN GENERAL, HOW WOULD YOU DESCRIBE THE KIND OF DRINKING THAT TYPICALLY GOES ON AT THE BASE CLUB? Would you call it . . .

(Circle one)

- Light drinking. . . . . 1
- Moderate drinking . . . . . 2
- Heavy drinking. . . . . 3
- Extremely heavy drinking. . . . . 4
- Have never been to a base club. . . . 5

23

90. WHAT ABOUT AT SQUADRON PARTIES - HOW WOULD YOU DESCRIBE THE DRINKING THAT TYPICALLY GOES ON THERE? Would you call it . . .

(Circle one)

- Light drinking. . . . . 1
- Moderate drinking . . . . . 2
- Heavy drinking. . . . . 3
- Extremely heavy drinking. . . . . 4
- Have never attended a squadron party . . . . . 5

24

CARD 05

DO NOT  
WRITE IN  
THIS SPACE

91. WHAT ABOUT DRINKING IN THE AIR FORCE GENERALLY - WOULD YOU SAY THAT, COMPARED TO CIVILIANS, AIR FORCE MEN TYPICALLY DRINK. . .

(Circle one)

- A lot more heavily. . . . . 1  
Somewhat more heavily . . . . . 2  
About the same. . . . . 3  
Somewhat less heavily . . . . . 4  
A lot less heavily. . . . . 5

25/

92. DO YOU THINK THAT BEING IN THE AIR FORCE HAS CONTRIBUTED TO THE AMOUNT YOU DRINK?

(Circle one)

- Yes . . . . . 1 ☐ Answer A  
No. . . . . 2 ☐ Go to question 93

26/

- A. PLEASE LIST BELOW SOME OF THE WAYS YOU THINK BEING IN THE AIR FORCE CONTRIBUTES TO YOUR DRINKING.

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27-28/

29-30/

31-32/

33-34/

CARD 15  
DO NOT  
WRITE IN  
THIS SPACE

93. BELOW IS ANOTHER LIST OF EXPERIENCES THAT PEOPLE HAVE REPORTED IN CONNECTION WITH DRINKING. FOR EACH EXPERIENCE, INDICATE HOW OFTEN IT HAPPENED TO YOU IN THE PAST YEAR.

(Circle one for each item)

	Happened 3 or more times in the past year	Happened twice in the past year	Happened once in the past year	Happened but not in the past year	Never Happened	
a. I had an illness connected with drinking which kept me from duty for a week or longer	1	2	3	4	5	35
b. My drinking may have hurt my chances for a promotion or a better assignment	1	2	3	4	5	36
c. I got a lower score on my efficiency report or performance rating because of drinking	1	2	3	4	5	37
d. I received judicial or non-judicial punishment because of my drinking	1	2	3	4	5	38
e. A physician said I should cut down on drinking	1	2	3	4	5	39

CARD 05

(Circle one for each item)

	Happened 3 or more times in the past year	Happened twice in the past year	Happened once in the past year	Happened but not in the past year	Never Happened	DO NOT WRITE IN THIS SPACE
f. My spouse said I should cut down on drinking	1	2	3	4	5	40/
g. People I work with said I should cut down on drinking	1	2	3	4	5	41/
h. My drinking caused me to lose a friend	1	2	3	4	5	42/
i. I stayed intoxicated for several days at a time	1	2	3	4	5	43/
j. I was warned about my drinking by a police- man (civilian or military) but <u>not</u> arrested	1	2	3	4	5	44/
k. I was arrested for drinking and driving	1	2	3	4	5	45/

CARD 05

(Circle one for each item)

	Happened 3 or more times in the past year	Happened twice in the past year	Happened once in the past year	Happened but not in the past year	Never Happened	DO NOT WRITE IN THIS SPACE
l. I spent time in jail because of my drinking	1	2	3	4	5	46/
m. My drinking contributed to my getting hurt in an accident	1	2	3	4	5	47/
n. My drinking contributed to an accident where others were hurt or property was damaged	1	2	3	4	5	48/
o. My spouse threatened to leave me because of my drinking	1	2	3	4	5	49
p. My spouse left me because of my drinking	1	2	3	4	5	50

CARD 05

94. ALTOGETHER, HOW MANY TIMES IN THE PAST HAVE YOU TRIED TO STOP DRINKING COMPLETELY?

Number of times: \_\_\_\_\_ ➡ Answer A  
Have never tried to stop drinking. . . 1 ➡ Circle '1' and go to question 95

DO NOT  
WRITE IN  
THIS SPACE

51-52/

- A. THE LAST TIME YOU TRIED, HOW LONG WERE YOU ABLE TO STOP DRINKING ALTOGETHER?

Number of days: \_\_\_\_\_

OR

Number of weeks: \_\_\_\_\_

OR

Number of months: \_\_\_\_\_

53-54/

55-56/

57-59/

95. HOW MANY TIMES IN THE PAST HAVE YOU TRIED TO CUT DOWN OR CONTROL YOUR DRINKING?

Number of times tried to cut down: \_\_\_\_\_ }  
Number of times tried to control: \_\_\_\_\_ } Answer A  
Never tried to cut down or control }  
my drinking. . . . . 1 ➡ Circle '1' and go to question 96

60-61/

62-63/

64/

- A. THE LAST TIME YOU TRIED, HOW LONG WERE YOU ABLE TO CUT DOWN OR CONTROL YOUR DRINKING?

Number of days: \_\_\_\_\_

OR

Number of weeks: \_\_\_\_\_

OR

Number of months: \_\_\_\_\_

65-66/

67-68/

69-71/

CARD 15

DO NOT  
WRITE IN  
THIS SPACE

96. HOW DIFFICULT WOULD IT BE FOR YOU TO CUT DOWN YOUR DRINKING BUT NOT STOP ALTOGETHER, IN THE NEXT FEW MONTHS?

(Circle one)

Very difficult . . . . . 1  
Fairly difficult . . . . . 2  
Not too difficult. . . . . 3  
Not difficult at all . . . . . 4

72

97. HOW DIFFICULT WOULD IT BE FOR YOU TO STOP DRINKING ALTOGETHER IN THE NEXT FEW MONTHS?

(Circle one)

Very difficult . . . . . 1  
Fairly difficult . . . . . 2  
Not too difficult. . . . . 3  
Not difficult at all . . . . . 4

73

98. WHAT DO YOU THINK YOU WILL ACTUALLY DO IN THE NEXT FEW MONTHS ABOUT YOUR DRINKING -- DO YOU THINK YOU WILL:

(Circle one)

Stop drinking altogether . . . . . 1  
Cut down, but not stop altogether. 2  
Drink the same . . . . . 3  
Drink more . . . . . 4  
Not sure . . . . . 5

74



CARD 05

DO NOT  
WRITE IN  
THIS SPACE

99. IF YOU PLAN TO CUT DOWN BUT NOT STOP ALTOGETHER, HOW CERTAIN ARE YOU THAT YOU WILL CUT DOWN ON YOUR DRINKING IN THE NEXT FEW MONTHS?

(Circle one)

Will definitely cut down my  
drinking . . . . . 1  
Will probably cut down my  
drinking . . . . . 2  
There is some chance I will cut  
down. . . . . 3  
I do not plan to cut down . . . . 4

75/

100. IF YOU PLAN TO STOP ALTOGETHER, HOW CERTAIN ARE YOU THAT YOU WILL STOP DRINKING ALTOGETHER, IN THE NEXT FEW MONTHS?

(Circle one)

Will definitely stop drinking  
altogether . . . . . 1  
Will probably stop drinking  
altogether . . . . . 2  
There is some chance I will stop  
altogether . . . . . 3  
I do not plan to stop altogether . 4

76/

CARD 36

DO NOT  
WRITE IN  
THIS SPACE

CARD 36

101. THIS IS A QUESTION ABOUT HOW YOU THINK THINGS WILL GO IN THE FUTURE. SOMETIMES PEOPLE REPORT THAT DRINKING HAS A HARMFUL EFFECT ON CERTAIN THINGS IN THEIR LIFE. IN THE FUTURE, IF YOU CONTINUE TO DRINK LIKE YOU HAVE BEEN IN THE PAST FEW MONTHS, HOW MUCH DO YOU THINK YOUR DRINKING WOULD HAVE A HARMFUL EFFECT ON:

(Circle one for each item)

	Very much	Somewhat	Not very Much	Not at all	
A. Your friendships and social life?	1	2	3	4	9/
B. Your physical health?	1	2	3	4	10/
C. Your mental well being?	1	2	3	4	11/
D. Your marriage or home life?	1	2	3	4	12/
E. Your job and assignment?	1	2	3	4	13
F. Your money or finances?	1	2	3	4	14
G. Your Air Force career?	1	2	3	4	15

102. HERE IS A LIST OF MEDICAL PROBLEMS. FOR EACH ONE, INDICATE WHETHER OR NOT YOU HAVE HAD THE PROBLEM IN THE PAST YEAR.

DO NOT  
WRITE IN  
THIS SPACE

In the past year, have you had:	<u>YES</u>	<u>NO</u>	
A. Colds. . . . .	1	2	16/
B. The flu. . . . .	1	2	17/
C. Hepatitis or yellow jaundice . . . . .	1	2	18/
D. Ulcers . . . . .	1	2	19/
E. Stomach pain or stomach ache not caused by overeating . . . . .	1	2	20/
F. High blood pressure. . . . .	1	2	21/
G. Heart disease - heart failure, heart attack, or chest pains . . . . .	1	2	22/
H. High blood cholesterol, high blood fat, or high lipid content . . . . .	1	2	23/
I. Arthritis, rheumatism. . . . .	1	2	24/
J. Headaches. . . . .	1	2	25/
K. Diabetes . . . . .	1	2	26/
L. Gout . . . . .	1	2	27/
M. Numbness, tingling, or burning in legs and feet . . . . .	1	2	28/
N. Episodes of dizziness, lightheadedness, or vertigo. . . . .	1	2	29/
O. Fractures or broken bones. . . . .	1	2	30/
P. Pancreatitis . . . . .	1	2	31/
Q. Loss of balance or trouble walking straight when not under the influence of alcohol. . . . .	1	2	32/
R. Vitamin deficiencies or anemia . . . . .	1	2	33/
S. Trouble focusing eyes when not under the influence of alcohol . . . . .	1	2	34/
T. Weakness in muscles and limbs. . . . .	1	2	35/
U. Enlarged liver, "fatty liver", . . . . .	1	2	36/
V. Cirrhosis of the liver, alcoholic liver disease. . . . .	1	2	37/

CARD 24

DO NOT  
WRITE IN  
THIS SPACE

103. HAVE YOU EVER BEEN IN A HOSPITAL OR INFIRMARY FOR AN ILLNESS OR ACCIDENT CONNECTED WITH DRINKING (INCLUDES DETOX)? IF YES, HOW MANY DAYS ALTOGETHER WERE YOU HOSPITALIZED IN THE PAST YEAR?

(Circle one)

Has never happened . . . . . 1

Happened but not in past year. . . . . 2

Has happened in past year:1 day in a hospital connected with  
drinking . . . . . 3

2 days . . . . . 4

3 days . . . . . 5

4 - 6 days . . . . . 6

7 - 13 days. . . . . 7

14 - 26 days . . . . . 8

27 days or more. . . . . 9

104. HAVE YOU EVER SEEN A PHYSICIAN AS AN OUTPATIENT FOR AN ILLNESS OR ACCIDENT CONNECTED WITH DRINKING? IF YES, HOW MANY VISITS CONNECTED WITH DRINKING DID YOU MAKE IN THE PAST YEAR?

(Circle one)

Never have seen a physician for  
illness or accident connected  
with drinking. . . . . 1Have visited a physician but not  
in past year . . . . . 2Have visited a physician in past year:1 visit to a physician connected with  
drinking . . . . . 3

2 visits . . . . . 4

3 visits . . . . . 5

4 - 5 visits . . . . . 6

6 - 10 visits. . . . . 7

11 - 15 visits . . . . . 8

16 or more visits. . . . . 9

CARD 06  
DO NOT  
WRITE IN  
THIS SPACE

105. HAVE YOU EVER BEEN TO AN ALCOHOLICS ANONYMOUS MEETING - AN AA MEETING?

(Circle one)

Yes. . . . . 1 ☐ Answer A  
No . . . . . 2 ☐ Go to question 106

40/

A. HOW MANY MEETINGS HAVE YOU BEEN TO IN THE PAST YEAR?

Number of meetings: \_\_\_\_\_

41-43/

106. HAVE YOU EVER HAD PROFESSIONAL COUNSELING OR TREATMENT, BEFORE THIS TIME, TO GET HELP FOR A DRINKING PROBLEM? (DO NOT INCLUDE AA.)

(Circle all that apply)

Yes, in an Air Force program . . . . . 1  
Yes, in a non-Air Force program. . . . . 2  
Yes, both in an Air Force and  
non-Air Force program. . . . . 3  
Never before this time . . . . . 4

44/

45/

46/

47/

CARD 26

DO NOT  
WRITE IN  
THIS SPACE

107. WHOSE IDEA WAS IT, MAINLY, THAT YOU ENTER AN AIR FORCE ALCOHOL PROGRAM?

(Circle one)

- My own idea . . . . . 01  
 My spouse's idea. . . . . 02  
 Another family member's idea. . . 03  
 A friend's idea . . . . . 04  
 My girlfriend's (or boyfriend's)  
 idea . . . . . 05  
 My supervisor's idea. . . . . 06  
 My commander's idea . . . . . 07  
 My doctor's idea . . . . . 08  
 A clergyman or chaplain's idea . . 09  
 Someone else's idea  
 Specify \_\_\_\_\_

48-49

10

A. WHAT EVENT OR EVENTS HAPPENED THAT LED TO THIS DECISION?  
(PLEASE BE SPECIFIC)

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50-52

52-53

54-55

108. ARE YOU IN THIS PROGRAM BECAUSE OF A DRINKING AND DRIVING INCIDENT?

(Circle one)

- Yes . . . . . 1  
 No . . . . . 2

56

109. HOW MANY DWIs HAVE YOU HAD IN THE PAST YEAR?

No. of DWIs: \_\_\_\_\_  
 (If none write "0")

57-58

110. HERE ARE SOME STATEMENTS PEOPLE HAVE MADE ABOUT DRINKING. PLEASE MARK FOR EACH STATEMENT WHETHER YOU STRONGLY AGREE, AGREE, ARE NEUTRAL, DISAGREE, OR STRONGLY DISAGREE.

DO NOT  
WRITE IN  
THIS SPACE

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
A. A party isn't a party unless alcoholic drinks are served . . . . .	1	2	3	4	5	59/
B. Many of the people in my unit think there is something wrong with a person who doesn't drink. . . . .	1	2	3	4	5	60/
C. Even a moderate amount of drinking damages the body. . . . .	1	2	3	4	5	61/
D. There is really no cure for alcoholism. . . . .	1	2	3	4	5	62/
E. If an alcoholic expects to get better, he/she must stop drinking entirely. . . . .	1	2	3	4	5	63/
F. It's all right to get drunk once in a while as long as it doesn't get to be a habit. . . . .	1	2	3	4	5	64/
G. It's a good thing that the Air Force has started a policy to deglamorize alcohol. . . . .	1	2	3	4	5	65/
H. Every military man should know how to hold his liquor. . . . .	1	2	3	4	5	66/
I. It's all right to have a drink or two at lunch on duty days . . . . .	1	2	3	4	5	67/
J. Drinking together helps keep up the spirit and morale of a unit . . . . .	1	2	3	4	5	68/
K. Alcoholism is basically a sign of moral weakness . . . . .	1	2	3	4	5	69/

CARD 06

DO NOT  
WRITE IN  
THIS SPACE

111. HERE ARE SOME STATEMENTS ABOUT THE EFFECTS OF ALCOHOL. PLEASE  
MARK FOR EACH STATEMENT WHETHER YOU BELIEVE IT IS TRUE OR FALSE.

	<u>True</u>	<u>False</u>	
A. Drinking too much liquor quickly can kill a person. . . . .	1	2	70/
B. Forgetting what happened while drinking is a sign of alcoholism. . . . .	1	2	71/
C. One can of beer has the same amount of alcohol as one shot of whiskey. . . . .	1	2	72/
D. Drinking black coffee and dousing your head with cold water will help you sober up quickly. .	1	2	73/
E. As long as you eat a balanced diet, drinking won't damage your body. . . . .	1	2	74/
F. A person can become physically addicted to alcohol . . . . .	1	2	75/
G. If you stick to drinking beer, you won't become an alcoholic . . . . .	1	2	76/
H. The best cure for a hangover is a drink . . . . .	1	2	77/

112. DO YOU THINK THERE ARE SOME PEOPLE WHO ARE SO SENSITIVE TO ALCOHOL  
THAT THEY CAN'T STOP DRINKING AFTER JUST ONE OR TWO DRINKS?

Yes. . . . . 1  
No . . . . . 2

CARD 07

9/

GO ON TO QUESTION 113, PAGE 53



113. DO YOU THINK THAT ALCOHOLISM IS A DISEASE FROM WHICH A PERSON CAN NEVER COMPLETELY RECOVER?

Yes. . . . . 1  
No . . . . . 2

DO NOT  
WRITE IN  
THIS SPACE

10/

114. DO YOU THINK THAT A PERSON WHO WAS ONCE AN ALCOHOLIC WILL ALWAYS BE AN ALCOHOLIC?

Yes. . . . . 1  
No . . . . . 2

11/

115. DO YOU THINK THAT AN ALCOHOLIC CAN EVER GO BACK TO MODERATE DRINKING AND NOT START DRINKING TOO MUCH?

Yes. . . . . 1  
No . . . . . 2

12/

116. DO YOU FEEL YOU YOURSELF ARE OR HAVE EVER BEEN AN ALCOHOLIC?

Yes, I am now. . . . . 1  
Yes, I have been in the past . . . . 2  
No . . . . . 3

13

Thank you for completing this form.

Please check through it to see if you have answered all the questions that pertain to you.

Seal the form in the postpaid envelope and mail it immediately to The Rand Corporation.

## **Appendix C**

### **FOLLOWUP QUESTIONNAIRE**

The dates specified in the followup questionnaire varied for each respondent. The date specified in questions concerning the rehabilitation services received by the respondent was the first day of the month following his entry into the program at one of the 20 study locations (e.g., November 1, 1977, for persons entering the program in October 1977). Questions concerning the respondent's alcohol-related behavior at followup normally pertained to the past 12 months. For the minority of respondents who completed the questionnaire 6 to 11 months after the admission survey, this time frame was reduced accordingly.

The pages have been renumbered for inclusion in this appendix. Alcohol Rehabilitation Centers (ARCs) are referred to by their original title, "Alcohol Treatment Centers (ATCs)."

## THE RAND CORPORATION STUDY OF SOCIAL ACTIONS PROGRAMS

### Follow-Up Questionnaire

The questions in this booklet concern drinking practices and Air Force alcohol programs. Please answer all the questions as frankly as you can. When you have finished, please check through the form to be sure you have answered all the questions. Place the form in the post-paid envelope and seal it. Social Actions will mail it directly to The Rand Corporation. This procedure will ensure that the Air Force will not see the information you give.

### PRIVACY STATEMENT

In accordance with paragraph 30, AFR 12-35, Air Force Privacy Program, the following information about this survey is provided:

- a. Authority. 10 U.S.C., 8012, Secretary of the Air Force: Powers and Duties, Delegation by.
- b. Principal purpose. The survey is being conducted to collect opinions and behavioral information relating to current and future Air Force policies and programs.
- c. Routine use. The survey data will be converted to statistical information for use by The Rand Corporation and the Air Force in evaluating and planning programs and policies.
- d. Participation in this survey is voluntary.
- e. No adverse action of any kind may be taken against any individual who elects not to participate in this survey.

## INSTRUCTIONS

READ EACH QUESTION CAREFULLY.

FOR EACH QUESTION, CIRCLE THE NUMBER OF THE ONE ANSWER THAT COMES CLOSEST TO YOUR EXPERIENCE OR OPINION.

FOLLOW ANY INSTRUCTIONS NEXT TO THE NUMBER YOU CIRCLED THAT TELL YOU WHICH QUESTION TO ANSWER NEXT. IF THERE ARE NO INSTRUCTIONS AFTER YOUR ANSWER, GO TO THE VERY NEXT QUESTION.

Example: 1. DO YOU SMOKE CIGARETTES?

(Circle one)

Yes. . . . . ① ♦ Answer A

No . . . . . 2 ♦ Go to question 2

A. ON THE AVERAGE, ABOUT HOW MANY PACKS A DAY DO YOU SMOKE?

(Circle one)

Less than one pack . . . . . 1

1-2 packs. . . . . 2

More than 2 packs. . . . . ③

SOMETIMES, DEPENDING ON THE ANSWER YOU CIRCLED, YOU WILL ALSO BE ASKED TO WRITE IN ANOTHER ANSWER BEFORE GOING ON TO THE NEXT QUESTION.

Example: 2. HAVE YOU HAD A COUGHING FIT FROM SMOKING IN THE PAST YEAR?

(Circle one)

Never happened to me . . . . . 1

Has happened, but not in  
the past year. . . . . 2

Go to  
Question 3

Has happened in the past year. . ③ ♦ Answer A

A. WHEN WAS THE LAST TIME THIS HAPPENED?

12-78  
Month/Year

CARD 01

7-8/01

--	--	--	--	--	--

1-6/

DO NOT  
WRITE IN  
THIS SPACE

- A. Please enter today's date: \_\_\_\_\_  
month / day / year

9-14/

- B. NOTE: IN A NUMBER OF PLACES IN THE SURVEY WE WILL BE ASKING YOU QUESTIONS ABOUT THE PAST YEAR (THE PERIOD FROM TODAY BACK TO ONE YEAR AGO). PLEASE DO YOUR BEST TO KEEP THIS PERIOD IN MIND AND NOT DESCRIBE EVENTS THAT TOOK PLACE BEFORE THIS DATE WHEN YOU ANSWER THESE PARTICULAR QUESTIONS.

- C. PLEASE INDICATE IF YOU ARE ON ACTIVE DUTY OR SEPARATED FROM THE AIR FORCE:

(Circle one)

- I am on active duty. . . . . 1  
I am separated or retired from  
the Air Force. . . . . 2

15/

- D. IMPORTANT - PLEASE READ CAREFULLY:

If you are now on active  
duty in the Air Force:

Fill out BLUE pages (pp. 1-4)  
AND  
Fill out WHITE pages (pp. 5-62)

If you are now separated or  
retired from the Air Force:

Fill out WHITE pages (pp. 5-62)  
AND  
Fill out YELLOW pages (pp. 63-68)

IF YOU ARE IN THE AIR FORCE, TURN NOW TO PAGE 1 (BLUE PAGES) AND BEGIN.

IF YOU ARE NOT NOW IN THE AIR FORCE, TURN TO PAGE 5 (WHITE PAGES) AND BEGIN.

THESE QUESTIONS ARE FOR THOSE CURRENTLY IN THE AIR FORCE  
ALL OTHERS PLEASE SKIP TO PAGE 5

CARD 01

DO NOT  
WRITE IN  
THIS SPACE

1. WHAT IS YOUR PERMANENT DUTY STATION?

Air Force Base \_\_\_\_\_, State (or country if not in U.S.) \_\_\_\_\_

16-18/

2. HOW LONG HAVE YOU BEEN AT YOUR PRESENT DUTY STATION? (COUNT ONLY THE TIME IN YOUR PRESENT TOUR.)

Number of MONTHS at present duty station: \_\_\_\_\_

19-21/

3. WHAT IS YOUR DUTY AFSC?

☐


Officer

☐

Prefix
Enlisted
Suffix

22-28/

4. WHAT IS THE NAME OF YOUR CURRENT MAJOR COMMAND?

Current major command: \_\_\_\_\_  
 (For example: "MAC," "TAC," etc.)

29-30/

CARD 01

5. HOW MANY PEOPLE - OFFICERS, AIRMEN AND CIVILIANS - DO YOU NORMALLY SUPERVISE? (COUNT ONLY THOSE WHO REPORT DIRECTLY TO YOU AND WHOSE PERFORMANCE RATINGS OR EFFICIENCY REPORTS YOU WRITE.)

Number of people supervised: \_\_\_\_\_  
(If none, write "0")

DO NOT  
WRITE IN  
THIS SPACE

31-32/

6. ARE YOU CURRENTLY SERVING IN YOUR FIRST TERM OF ENLISTMENT?

(Circle one)

Yes . . . . . 1  
No . . . . . 2  
Does not apply, I am an officer . . . 3

33/

7. DO YOU INTEND TO REENLIST WHEN YOUR PRESENT TERM OF SERVICE IS COMPLETED?

(Circle one)

Yes . . . . . 1  
Undecided, but probably yes . . . . . 2  
Undecided, but probably no . . . . . 3  
No . . . . . 4  
Will retire at end of present term . . 5  
Does not apply, I am an officer . . . 6

34/

8. WHAT IS YOUR PRESENT ACTIVE DUTY PAY GRADE?

or O- \_\_\_\_\_ (Officer)  
E- \_\_\_\_\_ (Enlisted)

CARD 01  
DO NOT  
WRITE IN  
THIS SPACE

35-36/

9. WHAT WAS YOUR LAST OVERALL APR/OER RATING (PERFORMANCE/EFFICIENCY RATING)?

APR/OER Rating: \_\_\_\_\_

A. WHEN DID YOU RECEIVE THIS LAST RATING?

\_\_\_\_\_  
Month/Year

37/

38-41/

10. WHAT TYPE OF QUARTERS DO YOU HAVE AT PRESENT?

(Circle one)

On base with dependents. . . . . 1  
On base barracks or nondependent quarters. . . 2  
Off base government housing. . . . . 3  
Off base civilian housing. . . . . 4

42/

11. IS YOUR SPOUSE WITH YOU AT YOUR PRESENT DUTY STATION?

(Circle one)

Yes, my spouse is with me. . . . . 1  
No, my spouse is not with me . . . . . 2  
I am not currently married . . . . . 3

43/

12. HOW MANY MONTHS HAVE YOU SPENT ASSIGNED OVERSEAS DURING THE PAST YEAR?  
(INCLUDE ALASKA AND HAWAII. COUNT YOUR PRESENT TOUR IF YOU ARE NOW  
OVERSEAS.)

Number of months overseas: \_\_\_\_\_  
(If none, write "0")

44-45/



CARD 01

DO NOT  
WRITE IN  
THIS SPACE

13. HOW MANY MONTHS HAVE YOU SPENT ASSIGNED TO ISOLATED OR REMOTE LOCATIONS DURING THE PAST YEAR?

Number of months at isolated  
or remote locations:

(If none, write "0")

46-47/

14. DURING THE PAST YEAR, HOW MANY MONTHS HAVE YOU BEEN STATIONED AWAY FROM YOUR SPOUSE?

Number of months:

(If none, write "0")

48-49/

I have not been married  
during the past year . . . . . 99

15. HAVE YOU BEEN DEMOTED DURING THE PAST YEAR?

(Circle one)

Yes . . . . . 1 ☐ Answer A and B

No . . . . . 2 ☐ Go to Question 16

50/

- A. WHAT WAS THE DATE YOU WERE DEMOTED? (IF YOU WERE DEMOTED MORE THAN ONCE, ENTER THE DATE OF YOUR LAST DEMOTION.)

Date of demotion: \_\_\_\_\_  
Month/Year

51-54/

- B. DID YOUR LAST DEMOTION RESULT FROM A DRINKING-RELATED INCIDENT THAT HAPPENED DURING THE PAST YEAR?

(Circle one)

Yes . . . . . 1

No . . . . . 2

55

CARD 01

THESE ARE QUESTIONS FOR EVERYONE TO ANSWERDO NOT  
WRITE IN  
THIS SPACE

16. HOW MUCH DO YOU WEIGH?

Pounds: \_\_\_\_\_

56-58.7

17. WHAT IS YOUR MARITAL STATUS?

(Circle one)

Married. . . . . 1  
 Separated. . . . . 2  
 Divorced . . . . . 3  
 Widowed . . . . . 4  
 Never married. . . . . 5

59.7

A. IF YOU ARE NOT LIVING WITH A SPOUSE, ARE YOU LIVING TOGETHER  
 AS MARRIED WITH A BOYFRIEND OR GIRLFRIEND?

(Circle one)

Yes. . . . . 1  
 No . . . . . 2

60

18. IN GENERAL, HOW WELL ARE THINGS GOING ALONG IN THESE AREAS OF YOUR LIFE  
AT THE PRESENT TIME?

(Circle one for each item  
A thru H)

	VERY WELL	FAIRLY WELL	NOT VERY WELL	
A. Your friendships and social life? . . .	1	2	3	61
B. Your job? . . . . .	1	2	3	62
C. Your money or finances? . . . . .	1	2	3	63
D. Your health? . . . . .	1	2	3	64
E. Getting along with your co-workers? . .	1	2	3	65
F. Getting along with your supervisor? . .	1	2	3	66
IF MARRIED (OR LIVING TOGETHER AS MARRIED):				
G. Your marriage (or relationship)? . . .	1	2	3	67
IF CHILDREN:				
H. Your relationship with your children? .	1	2	3	68

CARD 01

DO NOT  
WRITE IN  
THIS SPACE

HERE ARE SOME QUESTIONS ABOUT YOUR CLOSE FRIENDS.

19. ABOUT HOW MANY CLOSE FRIENDS DO YOU HAVE AT THE PRESENT TIME?Number of close friends:  
(If none write "0")

69-70/

20. HOW MANY OF THESE CLOSE FRIENDS ARE ALSO IN YOUR UNIT OR SQUADRON (OR DO YOU KNOW FROM WORK, IF YOU ARE A CIVILIAN)?

Number of close friends  
in unit or squadron  
(or at work if civilian):  
(If none write "0")

71-72/

21. HOW MANY OF ALL YOUR CLOSE FRIENDS ARE HEAVY DRINKERS, AT THE PRESENT TIME?

Number who are heavy  
drinkers:  
(If none write "0")

73-74

22. HOW MANY OF ALL YOUR CLOSE FRIENDS DO NOT DRINK AT ALL, AT THE PRESENT TIME?

Number who do not drink  
at all:  
(If none write "0")

75-76/

CARD 22

DO NOT  
WRITE IN  
THIS SPACE

23. THINK ABOUT YOUR IMMEDIATE SUPERVISOR - THE PERSON WHO MOST OFTEN CHECKS YOUR WORK OR REVIEWS YOUR PERFORMANCE ON THE JOB.

HOW OFTEN HAVE YOU HAD A DRINK WITH YOUR IMMEDIATE SUPERVISOR DURING THE PAST YEAR?

(Circle one)

- Every day or nearly every day. . . . . 1  
 3-4 times a week . . . . . 2  
 Once or twice a week . . . . . 3  
 1-3 times a month. . . . . 4  
 7-11 times in the past year. . . . . 5  
 3-6 times in the past year. . . . . 6  
 Once or twice in the past year. . . . . 7  
 Never in the past year. . . . . 8  
 I am not working and do not have  
 a supervisor . . . . . 9

24. HOW MUCH WOULD YOU SAY YOUR IMMEDIATE SUPERVISOR DRINKS - MUCH MORE THAN YOU DO, SOMEWHAT MORE THAN YOU DO, ABOUT THE SAME AS YOU, SOMEWHAT LESS THAN YOU, OR MUCH LESS THAN YOU?

(Circle one)

- Supervisor drinks much more than I do. 1  
 Supervisor drinks somewhat more than  
 I do . . . . . 2  
 Supervisor drinks about the same as  
 I do . . . . . 3  
 Supervisor drinks somewhat less than  
 I do . . . . . 4  
 Supervisor drinks much less than I do. 5  
 Supervisor doesn't drink at all. . . . 6  
 Don't have any idea how much my  
 supervisor drinks. . . . . 7  
 I am not working and do not have  
 a supervisor . . . . . 8

- A. WHEN WAS THE LAST TIME YOU WERE ASSIGNED TO A NEW SUPERVISOR?

Month/Year

CARD 02

DO NOT  
WRITE IN  
THIS SPACE

25. IF YOU ARE MARRIED (OR LIVING AS MARRIED) HOW WOULD YOU DESCRIBE YOUR SPOUSE'S (OR ROOMMATE'S) DRINKING?

(Circle one)

Drinks occasionally. . . . . 1  
 Drinks frequently. . . . . 2  
 Drinks heavily . . . . . 3  
 Has a drinking problem . . . . . 4  
 Doesn't drink at all . . . . . 5  
 I am not now married  
 (or living as married) . . . . . 6

12/

26. IF YOU ARE MARRIED (OR LIVING AS MARRIED), HAS YOUR SPOUSE (OR ROOMMATE) EVER HAD HELP FOR A DRINKING PROBLEM?

(Circle one)

Yes, he/she has had help but not in  
 the past year. . . . . 1  
 Yes, he/she has had help in the  
 past year. . . . . 2  
 No, he/she has not had help. . . . . 3  
 I am not married (or living  
 as married). . . . . 4  
 Don't know . . . . . 5

13/

27. HOW WOULD YOU DESCRIBE YOUR DRINKING DURING THE PAST SEVERAL MONTHS?

(Circle one)

Abstaining (never drinking) . . . . . 1  
 Occasional light drinking . . . . . 2  
 Frequent drinking . . . . . 3  
 Heavy drinking. . . . . 4  
 Problem drinking. . . . . 5  
 Alcoholic drinking. . . . . 6

14/

CARD 02

THE NEXT QUESTIONS ARE ABOUT THE 30 DAYS BEFORE YOUR LAST DRINK, INCLUDING THE DAY OF YOUR LAST DRINK.

28. SO THAT IT WILL BE EASIER FOR YOU TO KEEP THAT PERIOD OF TIME IN MIND, LOOK AT THE CALENDAR BELOW.

- A. Circle the date you last drank an alcoholic beverage--either beer, wine, or liquor--even if it was only a little.
- B. Including the date of your last drink as the first day, count back 30 days and circle that date.

DO NOT  
WRITE IN  
THIS SPACE

1977

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
1	1 2 3 4 5	1 2 3 4 5	1 2	1 2 3 4 5 6 7	1 2 3 4
2 3 4 5 6 7 8	6 7 8 9 10 11 12	6 7 8 9 10 11 12	3 4 5 6 7 8 9	8 9 10 11 12 13 14	5 6 7 8 9 10 11
9 10 11 12 13 14 15	13 14 15 16 17 18 19	13 14 15 16 17 18 19	10 11 12 13 14 15 16	15 16 17 18 19 20 21	12 13 14 15 16 17 18
16 17 18 19 20 21 22	20 21 22 23 24 25 26	20 21 22 23 24 25 26	17 18 19 20 21 22 23	22 23 24 25 26 27 28	19 20 21 22 23 24 25
23 24 25 26 27 28 29	27 28	27 28 29 30 31	24 25 26 27 28 29 30	29 30 31	26 27 28 29 30
30 31					

JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
1 2	1 2 3 4 5 6	1 2 3	1	1 2 3 4 5	1 2 3
3 4 5 6 7 8 9	7 8 9 10 11 12 13	4 5 6 7 8 9 10	2 3 4 5 6 7 8	6 7 8 9 10 11 12	4 5 6 7 8 9 10
10 11 12 13 14 15 16	14 15 16 17 18 19 20	11 12 13 14 15 16 17	9 10 11 12 13 14 15	13 14 15 16 17 18 19	11 12 13 14 15 16 17
17 18 19 20 21 22 23	21 22 23 24 25 26 27	18 19 20 21 22 23 24	16 17 18 19 20 21 22	20 21 22 23 24 25 26	18 19 20 21 22 23 24
24 25 26 27 28 29 30	28 29 30 31	25 26 27 28 29 30	23 24 25 26 27 28 29	27 28 29 30	25 26 27 28 29 30 31
31			30 31		

1978

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
1 2 3 4 5 6 7	1 2 3 4	1 2 3 4	1	1 2 3 4 5 6	1 2 3
8 9 10 11 12 13 14	5 6 7 8 9 10 11	5 6 7 8 9 10 11	2 3 4 5 6 7 8	7 8 9 10 11 12 13	4 5 6 7 8 9 10
15 16 17 18 19 20 21	12 13 14 15 16 17 18	12 13 14 15 16 17 18	9 10 11 12 13 14 15	14 15 16 17 18 19 20	11 12 13 14 15 16 17
22 23 24 25 26 27 28	19 20 21 22 23 24 25	19 20 21 22 23 24 25	16 17 18 19 20 21 22	21 22 23 24 25 26 27	18 19 20 21 22 23 24
29 30 31	26 27 28	26 27 28 29 30 31	23 24 25 26 27 28 29	28 29 30 31	25 26 27 28 29 30

JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER
SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
1	1 2 3 4 5	1 2	1 2 3 4 5 6 7	1 2 3 4	1 2
2 3 4 5 6 7 8	6 7 8 9 10 11 12	3 4 5 6 7 8 9	8 9 10 11 12 13 14	5 6 7 8 9 10 11	3 4 5 6 7 8 9
9 10 11 12 13 14 15	13 14 15 16 17 18 19	10 11 12 13 14 15 16	15 16 17 18 19 20 21	12 13 14 15 16 17 18	10 11 12 13 14 15 16
16 17 18 19 20 21 22	20 21 22 23 24 25 26	17 18 19 20 21 22 23	22 23 24 25 26 27 28	19 20 21 22 23 24 25	17 18 19 20 21 22 23
23 24 25 26 27 28 29	27 28 29 30 31	24 25 26 27 28 29 30	29 30 31	26 27 28 29 30	24 25 26 27 28 29 30
30 31					31

1979

JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS	SMTWTFS
1 2 3 4 5 6	1 2 3	1 2 3	1 2 3 4 5 6 7	1 2 3 4 5	1 2
7 8 9 10 11 12 13	4 5 6 7 8 9 10	4 5 6 7 8 9 10	8 9 10 11 12 13 14	6 7 8 9 10 11 12	3 4 5 6 7 8 9
14 15 16 17 18 19 20	11 12 13 14 15 16 17	11 12 13 14 15 16 17	15 16 17 18 19 20 21	13 14 15 16 17 18 19	10 11 12 13 14 15 16
21 22 23 24 25 26 27	18 19 20 21 22 23 24	18 19 20 21 22 23 24	22 23 24 25 26 27 28	20 21 22 23 24 25 26	17 18 19 20 21 22 23
28 29 30 31	25 26 27 28	25 26 27 28 29 30 31	29 30	27 28 29 30 31	24 25 26 27 28 29 30

C. Write the date of your last drink here: \_\_\_\_\_ (MONTH/DAY/YEAR)

D. Write the date 30 days before that here: \_\_\_\_\_ (MONTH/DAY/YEAR)

IF YOU HAD NOTHING TO DRINK IN THE PAST YEAR  
SKIP TO QUESTION 71 ON PAGE 22.

CARD 02

DO NOT  
WRITE IN  
THIS SPACE

IN THE REST OF THE QUESTIONNAIRE, THE PHRASE "30 DAYS BEFORE YOUR LAST DRINK" WILL ALWAYS REFER TO THE TIME PERIOD YOU JUST DESCRIBED.

29. NOW, THINKING BACK OVER THE 30 DAYS BEFORE YOUR LAST DRINK, HOW OFTEN DID YOU DRINK BEER?

(Circle one)

- |                                                                        |   |   |
|------------------------------------------------------------------------|---|---|
| Every day . . . . .                                                    | 1 | } |
| Nearly every day . . . . .                                             | 2 |   |
| 3-4 times a week . . . . .                                             | 3 |   |
| Once or twice a week . . . . .                                         | 4 |   |
| 2-3 times during the 30 days before<br>my last drink . . . . .         | 5 |   |
| Once during the 30 days before my<br>last drink . . . . .              | 6 |   |
| Didn't drink any beer in the 30 days<br>before my last drink . . . . . | 7 | ➔ |

Go to question 30

Go to question 32  
on page 11

28/

30. WHEN YOU DRANK BEER DURING THE 30 DAYS BEFORE YOUR LAST DRINK, HOW MUCH BEER DID YOU DRINK ON A TYPICAL DAY?

(Circle one)

- |                                              |    |
|----------------------------------------------|----|
| 1 can (or bottle) . . . . .                  | 01 |
| 2 cans . . . . .                             | 02 |
| 3 cans (one quart) . . . . .                 | 03 |
| 4 cans . . . . .                             | 04 |
| 5 cans (2 quarts) . . . . .                  | 05 |
| 6 cans . . . . .                             | 06 |
| 7 cans . . . . .                             | 07 |
| 8-11 cans (3 or 4 quarts) . . . . .          | 08 |
| 12-17 cans (5 or 6 quarts) . . . . .         | 09 |
| 18 or more cans (7 or more quarts) . . . . . | 10 |

29-30/

31. HOW LARGE ARE THE CANS OR BOTTLES THAT YOU USUALLY DRINK?

(Circle one)

- |                                               |   |
|-----------------------------------------------|---|
| Standard 12 oz. cans or bottles . . . . .     | 1 |
| 16 oz. (half-quart) cans or bottles . . . . . | 2 |
| 32 oz. (full quart) cans or bottles . . . . . | 3 |
| Less than 12 oz. cans or bottles . . . . .    | 4 |
| More than 32 oz. cans or bottles . . . . .    | 5 |
| Don't drink cans or bottles of beer . . . . . | 6 |

31/

CARD 02

DO NOT  
WRITE IN  
THIS SPACE

32. DURING THE 30 DAYS BEFORE YOUR LAST DRINK, HOW OFTEN DID YOU DRINK WINE?

(Circle one)

- |                                                                       |   |
|-----------------------------------------------------------------------|---|
| Every day . . . . .                                                   | 1 |
| Nearly every day . . . . .                                            | 2 |
| 3-4 times a week . . . . .                                            | 3 |
| Once or twice a week . . . . .                                        | 4 |
| 2-3 times during the 30 days before<br>my last drink . . . . .        | 5 |
| Once during the 30 days before my<br>last drink . . . . .             | 6 |
| Didn't drink any wine in the 30 days<br>before my last drink. . . . . | 7 |

Go to question 33

Go to question 35  
on page 12

32/

33. WHEN YOU DRANK WINE DURING THE 30 DAYS BEFORE YOUR LAST DRINK, HOW MUCH WINE DID YOU DRINK ON A TYPICAL DAY?

(Circle one)

- |                                                                    |    |
|--------------------------------------------------------------------|----|
| 1 wine glass (4 oz.). . . . .                                      | 01 |
| 2 wine glasses. . . . .                                            | 02 |
| 3 wine glasses (12 oz. - about half<br>a fifth or bottle). . . . . | 03 |
| 4 wine glasses. . . . .                                            | 04 |
| 5 wine glasses. . . . .                                            | 05 |
| 6 wine glasses (24 oz. - about one<br>fifth or bottle). . . . .    | 06 |
| 7 wine glasses. . . . .                                            | 07 |
| 8-11 wine glasses . . . . .                                        | 08 |
| 12 wine glasses (48 oz. - about<br>two fifths). . . . .            | 09 |
| More than 12 wine glasses or more<br>than two fifths . . . . .     | 10 |

33-34/



34. DURING THIS PERIOD, DID YOU USUALLY DRINK A REGULAR TABLE WINE OR WAS IT A FORTIFIED WINE SUCH AS SHERRY, VERMOUTH, PORT, OR DUBONNET?

(Circle one)

- A regular table wine. . . . . 1  
A fortified wine (like sherry,  
vermouth, port, or Dubonnet). . . . 2

DO NOT  
WRITE IN  
THIS SPACE

35/

35. DURING THE 30 DAYS BEFORE YOUR LAST DRINK, HOW OFTEN DID YOU DRINK HARD LIQUOR?

(Circle one)

- Every day. . . . . 1  
Nearly every day . . . . . 2  
3-4 times a week . . . . . 3  
Once or twice a week . . . . . 4  
2-3 times during the 30 days before  
my last drink . . . . . 5  
Once during the 30 days before my  
last drink . . . . . 6  
Didn't drink any hard liquor during  
the 30 days before my last drink . . 7

Go to question 36

Go to question 33  
on page 14

36/

CARD 32.

36. WHEN YOU DRANK HARD LIQUOR DURING THE 30 DAYS BEFORE YOUR LAST DRINK, HOW MUCH HARD LIQUOR DID YOU DRINK ON A TYPICAL DAY?

Mark either answer A (Number of drinks) or answer B (Number of ounces), whichever is easier for you to estimate.

A. Number of drinks

(OR)

B. Number of ounces

1 drink. . . . . 01  
 2 drinks . . . . . 02  
 3 drinks . . . . . 03  
 4 drinks . . . . . 04  
 5 drinks . . . . . 05  
 6 drinks . . . . . 06  
 7 drinks . . . . . 07  
 8-10 drinks . . . . 08  
 11-15 drinks . . . . 09  
 16-20 drinks . . . . 10  
 21 or more drinks. . 11

1 ounce. . . . . 01  
 2 ounces . . . . . 02  
 3 ounces . . . . . 03  
 4 ounces . . . . . 04  
 5 ounces . . . . . 05  
 6 ounces . . . . . 06  
 7 ounces . . . . . 07  
 8 ounces, Half Pint. 08  
 9-10 ounces . . . . 09  
 11-14 ounces . . . . 10  
 15-16 ounces,  
 One Pint . . . . . 11  
 17-24 ounces . . . . 12  
 25-32 ounces, 1 Fifth  
 to 1 Quart . . . . 13  
 More than 32 ounces,  
 More than 1 Quart. 14

37-39/

39-40/

37. IF YOU ANSWERED IN DRINKS: ABOUT HOW MANY OUNCES OF HARD LIQUOR ARE THERE IN YOUR AVERAGE DRINK?

(Circle one)

One ounce, One Shot. . . . . 1  
 1.25 ounces . . . . . 2  
 1.5 ounces, One jigger . . . . . 3  
 2 ounces . . . . . 4  
 3 ounces . . . . . 5  
 4 ounces . . . . . 6  
 5 or more ounces . . . . . 7

41/

CARD 02

DO NOT  
WRITE IN  
THIS SPACE

38. DURING THE 30 DAYS BEFORE YOUR LAST DRINK, WHAT WAS YOUR LONGEST PERIOD OF DRINKING WITHOUT STOPPING TO SLEEP?

Number of hours: \_\_\_\_\_

OR

Number of days: \_\_\_\_\_

42-43/

44/

39. NOW THINK ABOUT THE PAST YEAR--FROM TODAY BACK TO ONE YEAR AGO. DURING THE PAST YEAR, HOW MANY MONTHS DID YOU DRINK A LOT MORE THAN YOU DRANK DURING THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of months: \_\_\_\_\_

(If none, write "0")

IF NONE, SKIP TO QUESTION  
43 ON PAGE 19.

45-46/

QUESTIONS 39A THROUGH 42 CONCERN THESE MONTHS DURING THE PAST YEAR WHEN YOU DRANK MORE THAN YOU DID DURING THE 30 DAYS BEFORE YOUR LAST DRINK.

- A. DURING THOSE MONTHS YOU WERE DRINKING MORE, ABOUT HOW MANY DAYS PER MONTH DID YOU DRINK ANY ALCOHOLIC BEVERAGE?

(Circle one)

- Every day . . . . . 1  
 Nearly every day. . . . . 2  
 3-4 times a week. . . . . 3  
 Once or twice a week. . . . . 4  
 2-3 times a month . . . . . 5  
 Once a month. . . . . 6  
 Less than once a month. . . . . 7

CARD 02

DO NOT  
WRITE IN  
THIS SPACE

40. DURING THOSE MONTHS YOU WERE DRINKING MORE, ABOUT HOW MANY DAYS PER MONTH DID YOU DRINK BEER?

(Circle one)

- |                                                    |   |   |                                  |
|----------------------------------------------------|---|---|----------------------------------|
| Every day . . . . .                                | 1 | } | <div>Answer A</div>              |
| Nearly every day. . . . .                          | 2 |   |                                  |
| 3-4 times a week. . . . .                          | 3 |   |                                  |
| Once or twice a week. . . . .                      | 4 |   |                                  |
| 2-3 times a month . . . . .                        | 5 |   |                                  |
| Once a month. . . . .                              | 6 |   |                                  |
| Less than once a month. . . . .                    | 7 |   |                                  |
| Didn't drink any beer during those months. . . . . | 8 | ◆ | <div>Go to<br/>Question 41</div> |

48/

- A. DURING THOSE MONTHS (WHEN YOU WERE DRINKING MORE THAN YOU DID IN THE 30 DAYS BEFORE YOUR LAST DRINK), HOW MUCH BEER DID YOU DRINK ON A TYPICAL DAY WHEN YOU DRANK BEER?

(Circle one)

- |                                              |    |
|----------------------------------------------|----|
| 1 can (or bottle). . . . .                   | 01 |
| 2 cans . . . . .                             | 02 |
| 3 cans (one quart) . . . . .                 | 03 |
| 4 cans . . . . .                             | 04 |
| 5 cans (2 quarts). . . . .                   | 05 |
| 6 cans . . . . .                             | 06 |
| 7 cans . . . . .                             | 07 |
| 8-11 cans (3 or 4 quarts). . . . .           | 08 |
| 12-17 cans (5 or 6 quarts) . . . . .         | 09 |
| 18 or more cans (7 or more quarts) . . . . . | 10 |

49-50-

CARD 02  
DO NOT  
WRITE IN  
THIS SPACE

41. DURING THOSE MONTHS YOU WERE DRINKING MORE, ABOUT HOW MANY DAYS PER MONTH DID YOU DRINK WINE?

(Circle one)

- |                                                    |   |   |                      |
|----------------------------------------------------|---|---|----------------------|
| Every day . . . . .                                | 1 | } | Answer A             |
| Nearly every day. . . . .                          | 2 |   |                      |
| 3-4 times a week. . . . .                          | 3 |   |                      |
| Once or twice a week. . . . .                      | 4 |   |                      |
| 2-3 times a month. . . . .                         | 5 |   |                      |
| Once a month. . . . .                              | 6 |   |                      |
| Less than once a month. . . . .                    | 7 |   |                      |
| Didn't drink any wine during those months. . . . . | 8 | ◆ | Go to<br>Question 42 |

51/

- A. DURING THOSE MONTHS (WHEN YOU WERE DRINKING MORE THAN YOU DID IN THE 30 DAYS BEFORE YOUR LAST DRINK), HOW MUCH WINE DID YOU DRINK ON A TYPICAL DAY WHEN YOU DRANK WINE?

(Circle one)

- |                                                                     |    |
|---------------------------------------------------------------------|----|
| 1 wine glass (4 oz.). . . . .                                       | 01 |
| 2 wine glasses. . . . .                                             | 02 |
| 3 wine glasses (12 oz. - about<br>half a fifth or bottle) . . . . . | 03 |
| 4 wine glasses. . . . .                                             | 04 |
| 5 wine glasses. . . . .                                             | 05 |
| 6 wine glasses (24 oz. - about<br>one fifth or bottle). . . . .     | 06 |
| 7 wine glasses. . . . .                                             | 07 |
| 8-11 wine glasses . . . . .                                         | 08 |
| 12 wine glasses (48 oz. - about<br>two fifths) . . . . .            | 09 |
| More than 12 wine glasses<br>or more than two fifths . . . . .      | 10 |

52-53/

CARD 02  
DO NOT  
WRITE IN  
THIS SPACE

42. DURING THOSE MONTHS YOU WERE DRINKING MORE, ABOUT HOW MANY DAYS PER MONTH DID YOU DRINK HARD LIQUOR?

(Circle one)

- Every day . . . . . 1  
Nearly every day . . . . . 2  
3-4 times a week . . . . . 3  
Once or twice a week . . . . . 4  
2-3 times a month . . . . . 5  
Once a month . . . . . 6  
Less than once a month . . . . . 7  
Didn't drink any hard liquor during  
those months . . . . . 8

Answer A  
through D

Go to  
Question 43  
on page 19

54/

- A. DURING THOSE MONTHS (WHEN YOU WERE DRINKING MORE THAN YOU DID IN THE 30 DAYS BEFORE YOUR LAST DRINK), HOW MUCH HARD LIQUOR DID YOU DRINK ON A TYPICAL DAY WHEN YOU DRANK HARD LIQUOR?

Mark either answer B (number of drinks) or answer C (number of ounces), whichever is easier for you to estimate.

B. Number of Drinks

(OR)

C. Number of Ounces

- 1 drink . . . . . 01  
2 drinks . . . . . 02  
3 drinks . . . . . 03  
4 drinks . . . . . 04  
5 drinks . . . . . 05  
6 drinks . . . . . 06  
7 drinks . . . . . 07  
8-10 drinks . . . . . 08  
11-15 drinks . . . . . 09  
16-20 drinks . . . . . 10  
21 or more drinks . . . . . 11

- 1 ounce . . . . . 01  
2 ounces . . . . . 02  
3 ounces . . . . . 03  
4 ounces . . . . . 04  
5 ounces . . . . . 05  
6 ounces . . . . . 06  
7 ounces . . . . . 07  
8 ounces, Half Pint . . . 08  
9-10 ounces . . . . . 09  
11-14 ounces . . . . . 10  
15-16 ounces, One Pint . . 11  
17-24 ounces . . . . . 12  
25-32 ounces, 1 Fifth to  
1 Quart . . . . . 13  
More than 32 ounces, More  
than 1 Quart . . . . . 14

55-56/  
57-58/

CARD 02

DO NOT  
WRITE IN  
THIS SPACE

D. IF YOU ANSWERED THE PREVIOUS QUESTION IN DRINKS: ABOUT HOW MANY  
OUNCES OF HARD LIQUOR WERE THERE IN YOUR AVERAGE DRINK?

(Circle one)

One ounce one shot. . . . . 1  
1.25 ounces. . . . . 2  
1.5 ounces, one jigger . . . . . 3  
2 ounces . . . . . 4  
3 ounces . . . . . 5  
4 ounces . . . . . 6  
5 or more ounces . . . . . 7

53/

GO ON TO THE NEXT PAGE.

CARD 02

THE FOLLOWING QUESTIONS CONCERN THE PAST YEAR.DO NOT  
WRITE IN  
THIS SPACE

43. DURING THE PAST YEAR, HOW OFTEN DID YOU HAVE 8 OR MORE CANS OF BEER IN A SINGLE DAY (3 QUARTS OR MORE)?

(Circle one)

Every day or nearly every day. . . 1  
 3-4 times a week. . . . . 2  
 Once or twice a week. . . . . 3  
 1-3 times a month. . . . . 4  
 7-11 times in the past year. . . . 5  
 3-6 times in the past year. . . . 6  
 Once or twice in the past year. . . 7  
 Never in the past year. . . . . 8

60/

44. DURING THE PAST YEAR, HOW OFTEN DID YOU HAVE 8 OR MORE GLASSES OF WINE IN A SINGLE DAY (MORE THAN A FIFTH)?

(Circle one)

Every day or nearly every day. . . 1  
 3-4 times a week. . . . . 2  
 Once or twice a week. . . . . 3  
 1-3 times a month. . . . . 4  
 7-11 times in the past year. . . . 5  
 3-6 times in the past year. . . . 6  
 Once or twice in the past year. . . 7  
 Never in the past year. . . . . 8

61/

45. DURING THE PAST YEAR, HOW OFTEN DID YOU HAVE 8 OR MORE DRINKS OF HARD LIQUOR IN A SINGLE DAY (A HALF PINT OR MORE)?

(Circle one)

Every day or nearly every day. . . 1  
 3-4 times a week. . . . . 2  
 Once or twice a week. . . . . 3  
 1-3 times a month. . . . . 4  
 7-11 times in the past year. . . . 5  
 3-6 times in the past year. . . . 6  
 Once or twice in the past year. . . 7  
 Never in the past year. . . . . 8

62/



CARD 02

DO NOT  
WRITE IN  
THIS SPACE

46. DURING THE PAST YEAR, WHICH OF THE FOLLOWING BEST DESCRIBES YOUR PATTERN OF DRINKING?

(Circle one)

Abstaining (never drinking). . . . . 1  
Drinking almost every day. . . . . 2  
Mainly weekend drinking - or  
drinking on your days off. . . . . 3  
Going on binges or drinking sprees . . 4  
Some other pattern. . . . . 5  
(Specify: \_\_\_\_\_)

63/

47. HOW MANY BINGES OR SPREES DID YOU GO ON IN THE PAST YEAR?

Number of binges:

(If none write "0" and  
go to Question 48.)

64-65/

- A. HOW LONG DID THE AVERAGE BINGE OR SPREE LAST?

Number of days: \_\_\_\_\_

66-67/

48. ABOUT HOW MANY TIMES DURING THE PAST YEAR HAVE YOU BEEN HIGH  
ON ALCOHOL FOR MORE THAN 24 HOURS IN A ROW?

(Circle one)

5 or more times. . . . . 1  
4 times. . . . . 2  
3 times. . . . . 3  
2 times. . . . . 4  
Once. . . . . 5  
Never in the past year, but  
some time before that . . . . . 6  
Never in my life. . . . . 7

68/

CARD 02-03

DO NOT  
WRITE IN  
THIS SPACE

HERE ARE SOME EXPERIENCES THAT PEOPLE REPORT IN CONNECTION WITH DRINKING. CIRCLE HOW OFTEN YOU HAVE HAD EACH EXPERIENCE DURING THE PAST YEAR. THEN, FILL IN HOW MANY TIMES IT HAPPENED IN THE 30 DAYS BEFORE YOUR LAST DRINK, AND WRITE IN THE DATE YOU LAST HAD THE EXPERIENCE.

49. DURING THE PAST YEAR, I GOT HIGH ON ALCOHOL.

(Circle one)

- |                                              |                   |
|----------------------------------------------|-------------------|
| Has not happened in the past year. . . . . 1 | Go to question 50 |
| Happened once or twice. . . . . 2            | Answer A and B    |
| 3 to 6 times. . . . . 3                      |                   |
| 7 to 11 times. . . . . 4                     |                   |
| 1 to 3 times a month. . . . . 5              |                   |
| Once or twice a week. . . . . 6              |                   |
| 3 or 4 times a week. . . . . 7               |                   |
| Every day or nearly every day. . . . . 8     |                   |

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

50. DURING THE PAST YEAR, I WAS DRUNK.

(Circle one)

- |                                              |                   |
|----------------------------------------------|-------------------|
| Has not happened in the past year. . . . . 1 | Go to question 51 |
| Happened once or twice. . . . . 2            | Answer A and B    |
| 3 to 6 times. . . . . 3                      |                   |
| 7 to 11 times. . . . . 4                     |                   |
| 1 to 3 times a month. . . . . 5              |                   |
| Once or twice a week. . . . . 6              |                   |
| 3 or 4 times a week. . . . . 7               |                   |
| Every day or nearly every day. . . . . 8     |                   |

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

69/

70-71/

72-75/

76/

CARD 03

9-10/

11-14/

CARD 03

DO NOT  
WRITE IN  
THIS SPACE

51. DURING THE PAST YEAR, I GOT INTO A FIGHT WHERE I HIT SOMEONE WHEN I WAS DRINKING.

(Circle one)

Has not happened in the past year. . . . . 1	◆	Go to question 52	15/
Happened once or twice. . . . . 2	}	Answer A and B	
3-6 times. . . . . 3			
7 to 11 times. . . . . 4			
1 to 3 times a month . . . . . 5			
Once or twice a week . . . . . 6			
3 or 4 times a week. . . . . 7			
Every day or nearly every day. . . . 8			

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

16-17/

B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year \_\_\_\_\_

18-21/

52. DURING THE PAST YEAR, I GOT INTO A FIGHT WHERE I HIT SOMEONE WHEN I WAS NOT DRINKING.

(Circle one)

Has not happened in the past year. . . . . 1	◆	Go to question 53	22/
Happened once or twice . . . . . 2	}	Answer A and B	
3 to 6 times. . . . . 3			
7 to 11 times. . . . . 4			
1 to 3 times a month . . . . . 5			
Once or twice a week . . . . . 6			
3 or 4 times a week. . . . . 7			
Every day or nearly every day. . . . 8			

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

23-24/

B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year \_\_\_\_\_

25-28/

CARD 33

53. DURING THE PAST YEAR, I AWAKENED THE NEXT DAY NOT BEING ABLE TO REMEMBER SOME OF THE THINGS I HAD DONE WHILE DRINKING.

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

- Has not happened in the past year. . . 1 Go to question 54 29/  
 Happened once or twice. . . . . 2  
 3 to 6 times. . . . . 3  
 7 to 11 times . . . . . 4  
 1 to 3 times a month. . . . . 5 Answer A and B  
 Once or twice a week. . . . . 6  
 3 or 4 times a week . . . . . 7  
 Every day or nearly every day . . . . 8

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
 (If none, write "0")

30-31/

- B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

32-35/

54. DURING THE PAST YEAR, I SKIPPED REGULAR MEALS WHILE I WAS DRINKING.

(Circle one)

- Has not happened in the past year. . . 1 Go to question 55 36/  
 Happened once or twice. . . . . 2  
 3 to 6 times. . . . . 3  
 7 to 11 times . . . . . 4  
 1 to 3 times a month. . . . . 5 Answer A and B  
 Once or twice a week. . . . . 6  
 3 or 4 times a week . . . . . 7  
 Every day or nearly every day . . . . 8

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
 (If none, write "0")

37-38

- B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

39-42/

CARD 03

55. DURING THE PAST YEAR, I TOSSED DOWN SEVERAL DRINKS FAST TO GET A QUICKER EFFECT FROM THEM.

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

- Has not happened in the past year. . . 1 Go to question 56
- Happened once or twice. . . . . 2
- 3 to 6 times. . . . . 3
- 7 to 11 times. . . . . 4
- 1 to 3 times a month. . . . . 5 Answer A and B
- Once or twice a week. . . . . 6
- 3 or 4 times a week. . . . . 7
- Every day or nearly every day. . . . 8

43/

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

44-45/

B. WHEN WAS THE LAST TIME THIS HAPPENED? \_\_\_\_\_  
Month/Year

46-49/

56. DURING THE PAST YEAR, I TOOK A FEW QUICK DRINKS BEFORE GOING TO A PARTY TO MAKE SURE I HAD ENOUGH.

(Circle one)

- Has not happened in the past year. . . 1 Go to question 57
- Happened once or twice. . . . . 2
- 3 to 6 times. . . . . 3
- 7 to 11 times. . . . . 4
- 1 to 3 times a month. . . . . 5 Answer A and B
- Once or twice a week. . . . . 6
- 3 or 4 times a week. . . . . 7
- Every day or nearly every day. . . . 8

50/

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

51-52/

B. WHEN WAS THE LAST TIME THIS HAPPENED? \_\_\_\_\_  
Month/Year

53-56/

CARD 00

DO NOT  
WRITE IN  
THIS SPACE

57. DURING THE PAST YEAR, I TOOK A DRINK THE FIRST THING WHEN I GOT UP  
IN THE MORNING.

(Circle one)

- Has not happened in the past year. . . . 1 Go to question 58
- Happened once or twice. . . . . 2
- 3 to 6 times. . . . . 3
- 7 to 11 times. . . . . 4
- 1 to 3 times a month. . . . . 5 Answer A and B
- Once or twice a week. . . . . 6
- 3 or 4 times a week. . . . . 7
- Every day or nearly every day. . . . 8

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

B. WHEN WAS THE LAST TIME THIS HAPPENED? \_\_\_\_\_  
Month/Year

58. DURING THE PAST YEAR, I COULD NOT STOP DRINKING BEFORE BECOMING INTOXICATED.

(Circle one)

- Has not happened in the past year. . . . 1 Go to question 59
- Happened once or twice. . . . . 2
- 3 to 6 times. . . . . 3
- 7 to 11 times. . . . . 4
- 1 to 3 times a month. . . . . 5 Answer A and B
- Once or twice a week. . . . . 6
- 3 or 4 times a week. . . . . 7
- Every day or nearly every day. . . . 8

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

B. WHEN WAS THE LAST TIME THIS HAPPENED? \_\_\_\_\_  
Month/Year

CARD 03-04

59. DURING THE PAST YEAR, I WAS SICK BECAUSE OF DRINKING (NAUSEA, VOMITING, SEVERE HEADACHE, ETC.).

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

Has not happened in the past year. . . 1 ☐ Go to question 60  
 Happened once or twice. . . . . 2 ☐  
 3 to 6 times. . . . . 3 ☐  
 7 to 11 times. . . . . 4 ☐  
 1 to 3 times a month. . . . . 5 ☐ Answer A and B  
 Once or twice a week. . . . . 6 ☐  
 3 or 4 times a week. . . . . 7 ☐  
 Every day or nearly every day . . . . 8 ☐

71/

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
 (If none, write "0")

72-73/

- B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

74-77/

60. DURING THE PAST YEAR, I HAD THE "SHAKES" BECAUSE OF DRINKING.

CARD 04

(Circle one)

Has not happened in the past year. . . 1 ☐ Go to question 61  
 Happened once or twice. . . . . 2 ☐  
 3 to 6 times. . . . . 3 ☐  
 7 to 11 times. . . . . 4 ☐  
 1 to 3 times a month. . . . . 5 ☐ Answer A and B  
 Once or twice a week. . . . . 6 ☐  
 3 or 4 times a week. . . . . 7 ☐  
 Every day or nearly every day . . . . 8 ☐

9/

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
 (If none, write "0")

10-11/

- B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

12-15/

CARD 04

61. DURING THE PAST YEAR, I HAD HALLUCINATIONS OR DTs BECAUSE OF DRINKING.

(Circle one)

- Has not happened in the past year. . . . 1 Go to question 62
- Happened once or twice. . . . . 2
- 3 to 6 times. . . . . 3
- 7 to 11 times. . . . . 4
- 1 to 3 times a month. . . . . 5 Answer A and B
- Once or twice a week. . . . . 6
- 3 or 4 times a week. . . . . 7
- Every day or nearly every day . . . . 8

16/

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

(If none, write "0")

17-18/

B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

19-22/

62. DURING THE PAST YEAR, I HAD SEIZURES OR CONVULSIONS BECAUSE OF DRINKING.

(Circle one)

- Has not happened in the past year. . . . 1 Go to question 63
- Happened once or twice. . . . . 2
- 3 to 6 times. . . . . 3
- 7 to 11 times. . . . . 4
- 1 to 3 times a month. . . . . 5 Answer A and B
- Once or twice a week. . . . . 6
- 3 or 4 times a week. . . . . 7
- Every day or nearly every day . . . . 8

23

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_

(If none, write "0")

24-25

B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

26-27



CARD 04

63. DURING THE PAST YEAR, MY HANDS SHOOK A LOT IN THE MORNING AFTER DRINKING.

(Circle one)

- Has not happened in the past year . . . 1 ☐ Go to question 64
- Happened once or twice. . . . . 2 ☐ Answer A and B
- 3 to 6 times. . . . . 3 ☐
- 7 to 11 times . . . . . 4 ☐
- 1 to 3 times a month. . . . . 5 ☐
- Once or twice a week. . . . . 6 ☐
- 3 or 4 times a week . . . . . 7 ☐
- Every day or nearly every day . . . . 8 ☐

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

64. DURING THE PAST YEAR, I DROVE A CAR JUST AFTER I HAD 5 OR MORE DRINKS IN A TWO-HOUR PERIOD.

(Circle one)

- Has not happened in the past year . . . 1 ☐ Go to question 65
- Happened once or twice. . . . . 2 ☐ Answer A and B
- 3 to 6 times. . . . . 3 ☐
- 7 to 11 times . . . . . 4 ☐
- 1 to 3 times a month. . . . . 5 ☐
- Once or twice a week. . . . . 6 ☐
- 3 or 4 times a week . . . . . 7 ☐
- Every day or nearly every day . . . . 8 ☐

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

DO NOT  
WRITE IN  
THIS SPACE

30/

31-32/

33-36/

37/

38-39/

40-43/

QUESTIONS 65-70 CONCERN THINGS THAT HAVE HAPPENED TO PEOPLE ON THEIR DUTY DAYS (OR THEIR WORKING DAYS IF SEPARATED FROM THE AIR FORCE). CIRCLE HOW OFTEN EACH THING HAPPENED TO YOU DURING THE PAST YEAR. THEN, FILL IN HOW MANY TIMES IT HAPPENED TO YOU IN THE 30 DAYS BEFORE YOUR LAST DRINK, AND WRITE IN THE DATE YOU LAST HAD THE EXPERIENCE.

CARD 24

DO NOT  
WRITE IN  
THIS SPACE

65. I WAS ON DUTY OR AT WORK BUT DID NOT WORK AT MY NORMAL LEVEL OF PERFORMANCE BECAUSE OF DRINKING OR A HANGOVER.

(Circle one)

Has not happened on a duty or  
work day in the past year. . . . . 1 → Go to question 66

Happened on 1 duty or work day  
in the past year. . . . . 2

2 days in the past year. . . . . 3

3 days in the past year. . . . . 4

4-6 days in the past year. . . . . 5

7-11 days in the past year. . . . . 6

12-20 days in the past year. . . . . 7

21-39 days in the past year. . . . . 8

40 days or more  
in the past year. . . . . 9

Answer A and B

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

- B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

66. I WAS LATE TO WORK OR LEFT EARLY BECAUSE OF DRINKING OR A HANGOVER.

(Circle one)

Has not happened on a duty or  
work day in the past year. . . . . 1 → Go to question 67

Happened on 1 duty or work day  
in the past year. . . . . 2

2 days in the past year. . . . . 3

3 days in the past year. . . . . 4

4-6 days in the past year. . . . . 5

7-11 days in the past year. . . . . 6

12-20 days in the past year. . . . . 7

21-39 days in the past year. . . . . 8

40 days or more  
in the past year. . . . . 9

Answer A and B

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

- B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

CARD 04

67. I WAS OFF-DUTY OR OFF-WORK BECAUSE OF DRINKING, A HANGOVER, OR AN ILLNESS CAUSED BY DRINKING.

(Circle one)

Has not happened on a duty or work day in the past year. . . . . 1 → Go to question 68

Happened on 1 duty or work day in the past year. . . . . 2

2 days in the past year. . . . . 3

3 days in the past year. . . . . 4

4-6 days in the past year. . . . . 5

7-11 days in the past year. . . . . 6 Answer A and B

12-20 days in the past year. . . . . 7

21-39 days in the past year. . . . . 8

40 days or more in the past year. . . . . 9

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

- B. WHEN WAS THE LAST TIME THIS HAPPENED? \_\_\_\_\_  
Month/Year

68. I HAD A DRINK 2 HOURS OR LESS BEFORE GOING ON DUTY OR TO WORK.

(Circle one)

Has not happened on a duty or work day in the past year. . . . . 1 → Go to question 69

Happened on 1 duty or work day in the past year. . . . . 2

2 days in the past year. . . . . 3

3 days in the past year. . . . . 4

4-6 days in the past year. . . . . 5

7-11 days in the past year. . . . . 6 Answer A and B

12-20 days in the past year. . . . . 7

21-39 days in the past year. . . . . 8

40 days or more in the past year. . . . . 9

- A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: \_\_\_\_\_  
(If none, write "0")

- B. WHEN WAS THE LAST TIME THIS HAPPENED? \_\_\_\_\_  
Month/Year

DO NOT  
WRITE IN  
THIS SPACE

50/

52-11

61-54/

7-

66-67/

68-71/

CARD 14-05

69. I WAS HIGH FROM DRINKING WHILE ON DUTY OR AT WORK.

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

- Has not happened on a duty or work day in the past year. . . . . 1 Go to question 70 72/
- Happened on 1 duty or work day in the past year. . . . . 2
- 2 days in the past year . . . . . 3
- 3 days in the past year . . . . . 4
- 4-6 days in the past year . . . . . 5
- 7-11 days in the past year. . . . . 6 Answer A and B
- 12-20 days in the past year . . . . . 7
- 21-39 days in the past year . . . . . 8
- 40 days or more in the past year . . . . . 9

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: (If none, write "0")

73-74

B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

75-78

CARD 15

70. I DRANK ON DUTY OR AT WORK.

(Circle one)

- Has not happened on a duty or work day in the past year. . . . . 1 Go to question 71 9
- Happened on 1 duty or work day in the past year . . . . . 2
- 2 days in the past year . . . . . 3
- 3 days in the past year . . . . . 4
- 4-6 days in the past year . . . . . 5
- 7-11 days in the past year. . . . . 6 Answer A and B
- 12-20 days in the past year . . . . . 7
- 21-39 days in the past year . . . . . 8
- 40 days or more in the past year . . . . . 9

A. HOW MANY TIMES DID THIS HAPPEN IN THE 30 DAYS BEFORE YOUR LAST DRINK?

Number of times: (If none, write "0")

10-11

B. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

12-15

CARD 05

71. IF YOU EVER WORKED BELOW YOUR NORMAL LEVEL OF PERFORMANCE BECAUSE OF DRINKING OR A HANGOVER, HOW WOULD YOU RATE YOUR PERFORMANCE THE LAST TIME THIS HAPPENED? (ANSWER EVEN IF THIS HAPPENED MORE THAN ONE YEAR AGO.)

(Circle one)

Never worked below my normal level of  
performance because of drinking or  
a hangover. . . . . 01

Worked close to 90% of my normal  
level of performance. . . . . 02

Worked close to 80% . . . . . 03

Worked close to 70% . . . . . 04

Worked close to 60% . . . . . 05

Worked close to 50% . . . . . 06

Worked close to 40% . . . . . 07

Worked close to 30% . . . . . 08

Worked close to 20% . . . . . 09

Worked close to 10% . . . . . 10

DO NOT  
WRITE IN  
THIS SPACE

16-17/

72. IF YOU WERE EVER LATE TO WORK OR EVER LEFT EARLY BECAUSE OF DRINKING OR A HANGOVER, HOW LONG WERE YOU AT WORK THE LAST TIME THIS HAPPENED? (ANSWER EVEN IF THIS HAPPENED MORE THAN ONE YEAR AGO.)

(Circle one)

Never was late to work or left early  
because of drinking or a hangover . . 1

Worked about 3/4 day . . . . . 2

Worked about 1/2 day . . . . . 3

Worked about 1/4 day . . . . . 4

18/

CARD 35

73. HAVE YOU EVER BEEN IN A HOSPITAL OR INFIRMARY FOR AN ILLNESS OR ACCIDENT CONNECTED WITH DRINKING? IF YES, HOW MANY DAYS ALTOGETHER WERE YOU HOSPITALIZED IN THE PAST YEAR? (DO NOT INCLUDE DAYS SPENT IN AN ALCOHOL TREATMENT CENTER AS PART OF AN AIR FORCE ALCOHOL TREATMENT PROGRAM.)

(Circle one)

- Has never happened . . . . . 1  
 Happened but not in the past year. . . . . 2  
 1 day in a hospital connected with drinking in the past year. . . . . 3  
 2 days in the past year. . . . . 4  
 3 days in the past year. . . . . 5  
 4-6 days in the past year. . . . . 6  
 7-13 days in the past year. . . . . 7  
 14-26 days in the past year. . . . . 8  
 27 days or more in the past year. . . . . 9

Go to Question 74

DO NOT  
WRITE IN  
THIS SPACE

19/

Answer A

A. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

20-23/

74. HAVE YOU EVER BEEN IN A HOSPITAL OR INFIRMARY FOR A REASON OTHER THAN A DRINKING-RELATED ILLNESS OR ACCIDENT? IF YES, HOW MANY DAYS ALTOGETHER WERE YOU HOSPITALIZED IN THE PAST YEAR?

(Circle one)

- Has never happened . . . . . 1  
 Happened but not in the past year. . . . . 2  
 1 day in a hospital not connected with drinking in the past year. . . . . 3  
 2 days in the past year. . . . . 4  
 3 days in the past year. . . . . 5  
 4-6 days in the past year. . . . . 6  
 7-13 days in the past year. . . . . 7  
 14-26 days in the past year. . . . . 8  
 27 days or more in the past year. . . . . 9

Go to Question 75

24/

Answer A

A. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

25-28

75. NOW THINK ABOUT THE PERIOD FROM TWO YEARS AGO TODAY UP TO ONE YEAR AGO TODAY. DURING THOSE 12 MONTHS, WERE YOU IN A HOSPITAL OR INFIRMARY FOR A REASON OTHER THAN A DRINKING-RELATED ILLNESS OR ACCIDENT?

(Circle One)

- Did not happen during the 12 months prior to the past year. . . . . 1 ☐ Go to Question 76
- 1 day in a hospital not connected with drinking during the 12 months prior to the past year . . . 2 } Answer A
- 2 days. . . . . 3 }
- 3 days. . . . . 4 }
- 4-6 days. . . . . 5 }
- 7-13 days . . . . . 6 }
- 14-26 days. . . . . 7 }
- 27 days or more during the 12 months prior to the past year . . . 8 }

- A. WHEN WAS THE LAST TIME THIS HAPPENED DURING THE 12 MONTHS PRIOR TO THE PAST YEAR?

Month/Year

76. HAVE YOU EVER SEEN A PHYSICIAN AS AN OUTPATIENT FOR AN ILLNESS OR ACCIDENT CONNECTED WITH DRINKING? IF YES, HOW MANY VISITS CONNECTED WITH DRINKING DID YOU MAKE IN THE PAST YEAR? (DO NOT INCLUDE VISITS MADE AS PART OF AN AIR FORCE ALCOHOL TREATMENT PROGRAM.)

(Circle One)

- Have never seen a physician for illness or accident connected with drinking. 1 } Go to Question 77
- Have visited a physician but not in the past year. . . . . 2 }
- 1 visit to a physician connected with drinking in the past year. . . . . 3 }
- 2 visits in the past year. . . . . 4 }
- 3 visits in the past year. . . . . 5 }
- 4-5 visits in the past year. . . . . 6 Answer A
- 6-10 visits in the past year . . . . . 7 }
- 11-15 visits in the past year. . . . . 8 }
- 16 or more visits in the past year. . . 9 }

- A. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

DO NOT  
WRITE IN  
THIS SPACE

29/

30-33/

34/

35-38/

CARD 05

77. DURING THE PAST YEAR, HOW MANY TIMES HAVE YOU VISITED A PHYSICIAN AS AN OUTPATIENT FOR A REASON OTHER THAN A DRINKING-RELATED ILLNESS OR ACCIDENT?

(Circle one)

Did not visit a physician, or visited a physician only for a drinking-related illness or accident in the past year. . . 1

Go to Question 78

39/

1 visit to a physician not connected with drinking in the past year . . . 2

2 visits in the past year . . . 3

3 visits in the past year . . . 4

4-5 visits in the past year . . . 5

6-10 visits in the past year. . . 6

11-15 visits in the past year . . . 7

16 or more visits in the past year. . . 8

Answer A

- A. WHEN WAS THE LAST TIME THIS HAPPENED?

Month/Year

40-43/

78. NOW THINK ABOUT THE PERIOD FROM TWO YEARS AGO TODAY UP TO ONE YEAR AGO TODAY. DURING THOSE 12 MONTHS, DID YOU VISIT A PHYSICIAN AS AN OUTPATIENT FOR A REASON OTHER THAN A DRINKING-RELATED ILLNESS OR ACCIDENT?

(Circle one)

Did not visit a physician, or visited a physician only for a drinking-related illness or accident during the 12 months prior to the past year. . . 1

Go to Question 79

44/

1 visit to a physician not connected with drinking in the 12 months prior to the past year . . . 2

2 visits. . . 3

3 visits. . . 4

4-5 visits. . . 5

6-10 visits . . . 6

11-15 visits. . . 7

16 or more visits in the 12 months prior to the past year. . . 8

Answer A

- A. WHEN WAS THE LAST TIME THIS HAPPENED DURING THE 12 MONTHS PRIOR TO THE PAST YEAR?

Month/Year

45-48/



CARD 05

79. BELOW IS A LIST OF EXPERIENCES THAT PEOPLE HAVE REPORTED IN CONNECTION WITH DRINKING. FOR EACH EXPERIENCE, INDICATE HOW OFTEN IT HAPPENED TO YOU DURING THE PAST YEAR. THEN, WRITE IN THE DATE THE EXPERIENCE LAST HAPPENED TO YOU.

(Circle one number for each item.  
Then fill in the date under each item.)

	Happened 3 or more times in the past year	Happened twice in the past year	Happened once in the past year	Happened, but <u>not</u> in the past year	Never Happened	
a. I had an illness connected with drinking which kept me from work for a week or longer.	1	2	3	4	5	49/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						50-53/
						Month/Year
b. My drinking may have hurt my chances for a promotion or a better assignment.	1	2	3	4	5	54/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						55-58/
						Month/Year
c. I got a lower score on my efficiency report or performance rating because of drinking.	1	2	3	4	5	59/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						60-63/
						Month/Year
d. I received judicial or non-judicial punishment (Article 15) because of my drinking.	1	2	3	4	5	64/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						65-68/
						Month/Year

DO NOT  
WRITE IN  
THIS SPACE

CARD 25-26

DO NOT  
WRITE IN  
THIS SPACE(Circle one number for each item.  
Then fill in the date under each item.)

	Happened 3 or more times in the past year	Happened twice in the past year	Happened once in the past year	Happened, but <u>not</u> in the past year	Never Happened	
e. A physician said I should cut down on drinking.	1	2	3	4	5	69/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						70-73/
						Month/Year
f. My spouse said I should cut down on drinking.	1	2	3	4	5	74/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						75-78/
						Month/Year
g. People I work with said I should cut down on drinking.	1	2	3	4	5	9/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						10-13/
						Month/Year
h. My drinking caused me to lose a friend.	1	2	3	4	5	14/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						15-18/
						Month/Year
i. I stayed intoxicated for several days at a time.	1	2	3	4	5	19/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						20-23/
						Month/Year
j. I was warned about my drinking by a policeman (civilian or military) but not arrested.	1	2	3	4	5	24/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						25-28/
						Month/Year

CARD 06

CARD 06

DO NOT  
WRITE IN  
THIS SPACE(Circle one number for each item.  
Then fill in the date under each item.)

	Happened 3 or more times in the past year	Happened twice in the past year	Happened once in the past year	Happened, but not in the past year	Never Happened	
k. I was arrested for drinking and driving.	1	2	3	4	5	37
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						37-387
Month/Year						
l. I was arrested for drinking <u>not</u> related to driving.	1	2	3	4	5	38
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						38-387
Month/Year						
m. I spent time in jail because of my drinking.	1	2	3	4	5	39
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						39-407
Month/Year						
n. My drinking contributed to my getting hurt in an accident.	1	2	3	4	5	40
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						40-417
Month/Year						
o. My drinking contributed to an accident where others were hurt or property was damaged.	1	2	3	4	5	41
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						41-427
Month/Year						

CARD 26

DO NOT  
WRITE IN  
THIS SPACE(Circle one number for each item.  
Then fill in the date under each item.)

	Happened 3 or more times in the past year	Happened twice in the past year	Happened once in the past year	Happened, but not in the past year	Never Happened	
p. My spouse threat- ened to leave me because of my drinking.	1	2	3	4	5	54/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						55-58/
						Month/Year
q. My spouse threatened to leave me for other reasons.	1	2	3	4	5	59/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						60-63/
						Month/Year
r. My spouse left me because of my drinking.	1	2	3	4	5	64/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						65-68/
						Month/Year
s. My spouse left me for other reasons.	1	2	3	4	5	69/
WHEN WAS THE <u>LAST</u> TIME THIS HAPPENED?						70-73/
						Month/Year

CARD 06-07

80. HAS YOUR DRINKING EVER CONTRIBUTED TO DAMAGE OR LOSS OF AIR FORCE PROPERTY? (ANSWER EVEN IF THIS HAPPENED MORE THAN ONE YEAR AGO.)

(Circle one)

Yes . . . . . 1 ♦ Answer A and B  
No. . . . . 2 ♦ Go to Question 81

A. BRIEFLY DESCRIBE THE PROPERTY DAMAGED OR LOST:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

B. ESTIMATE THE COST OF REPLACING OR REPAIRING THIS PROPERTY:

\_\_\_\_\_ dollars

DO NOT  
WRITE IN  
THIS SPACE

74/

75-76/

CARD 07

9-14/

81. WHILE IN THE AIR FORCE, DID YOU EVER SPEND TIME IN JAIL BECAUSE OF YOUR DRINKING? (ANSWER EVEN IF THIS HAPPENED MORE THAN ONE YEAR AGO.)

(Circle one)

Yes . . . . . 1 ♦ Answer A and B  
No. . . . . 2 ♦ Go to Question 82

A. HOW MANY DAYS WERE YOU IN JAIL THE LAST TIME THIS HAPPENED?

Number of days in jail: \_\_\_\_\_

B. HOW MANY OF THESE DAYS IN JAIL WERE DAYS YOU WOULD OTHERWISE HAVE BEEN ON DUTY? (IF YOU WERE IN JAIL MORE THAN ONCE, ANSWER FOR THE LAST TIME.)

Number of duty days in jail: \_\_\_\_\_  
(If none, write "0")

15/

16-17/

18-19/

CARD 07

82. HERE IS A LIST OF MEDICAL PROBLEMS. FOR EACH ONE, INDICATE WHETHER OR NOT YOU HAVE HAD THE PROBLEM DURING THE PAST YEAR.

DO NOT  
WRITE IN  
THIS SPACE

	YES	NO
A. Colds. . . . .	1	2 20/
B. The flu. : . . . .	1	2 21/
C. Hepatitis or yellow jaundice . . . . .	1	2 22/
D. Ulcers . . . . .	1	2 23/
E. Stomach pain or stomach ache not caused by overeating . . . . .	1	2 24/
F. Bleeding from the intestines . . . . .	1	2 25/
G. High blood pressure . . . . .	1	2 26/
H. Heart disease - heart failure, heart attack, or chest pains. . . . .	1	2 27/
I. High blood cholesterol, high blood fat, or high lipid content. . . . .	1	2 28/
J. Arthritis, rheumatism. . . . .	1	2 29/
K. Headaches. . . . .	1	2 30/
L. Diabetes . . . . .	1	2 31/
M. Low blood sugar, hypoglycemia. . . . .	1	2 32/
N. Gout . . . . .	1	2 33/
O. Numbness, tingling, or burning in legs and feet. . .	1	2 34/
P. Episodes of dizziness, lightheadedness, or vertigo .	1	2 35/
Q. Fractures or broken bones. . . . .	1	2 36/
R. Pancreatitis . . . . .	1	2 37/
S. Loss of balance or trouble walking straight when not under the influence of alcohol . . . . .	1	2 38/
T. Vitamin deficiencies or anemia . . . . .	1	2 39/
U. Trouble focusing eyes when not under the influence of alcohol . . . . .	1	2 40/
V. Weakness in muscles and limbs. . . . .	1	2 41/
W. Enlarged liver, "fatty liver". . . . .	1	2 42/
X. Cirrhosis of the liver, alcoholic liver disease. . .	1	2 43/

CARD 07

HERE ARE SOME QUESTIONS ABOUT AIR FORCE ALCOHOL PROGRAMS YOU HAVE HAD CONTACT WITH AND YOUR REACTIONS TO THEM.

DO NOT  
WRITE IN  
THIS SPACE

83. WHAT IS YOUR PRESENT STATUS WITH AIR FORCE ALCOHOL PROGRAMS (ALCOHOL TREATMENT CENTERS OR SOCIAL ACTIONS ALCOHOL PROGRAMS)?

(Circle one)

- I am in Active Rehabilitation. . . . . 1
- I am in Follow-On Support. . . . . 2
- I have successfully completed a treatment program (include programs of Alcohol Awareness Seminars alone). . . . . 3
- I entered an alcohol program but did not complete it. . . . . 4
- I never received alcohol-related services. . . . . 5
- Other. . . . . 6

(Please describe: \_\_\_\_\_  
\_\_\_\_\_)

84. THINK ABOUT THE INCIDENT OR EVENT THAT OCCURRED SHORTLY BEFORE FEB. 1, 1978, AND LED TO YOUR CONTACT WITH AN ALCOHOL TREATMENT CENTER OR A SOCIAL ACTIONS ALCOHOL PROGRAM. WHAT WAS THIS INCIDENT OR EVENT?

(Circle one)

- Alcohol-related arrest . . . . . 1
- Referral by commander or supervisor. . . . . 2
- Referral by doctor or hospital . . . . . 3
- Other incident or event. . . . . 4

(Specify: \_\_\_\_\_  
\_\_\_\_\_)

A. WHEN DID THIS INCIDENT OR EVENT OCCUR?

Month/Year

CARD 07

85. BEFORE THIS INCIDENT, HAD YOU EVER RECEIVED SERVICES FROM AN AIR FORCE ALCOHOL TREATMENT PROGRAM? (DO NOT INCLUDE ROUTINE DRUG/ALCOHOL SEMINARS IN CONNECTION WITH A PCS.)

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

Yes . . . . . 1    ☐    Answer A and B  
No . . . . . 2    ☐    Go to Question 86

517

- A. BEFORE THIS INCIDENT, WHICH OF THE FOLLOWING SERVICES HAD YOU RECEIVED?

(Circle all that apply)

Alcohol Awareness Seminars . . . . . 1  
Individual or group counseling sessions. . . 2  
Detoxification . . . . . 3  
Inpatient services in an Alcohol  
Treatment Center . . . . . 4  
Other. . . . . 5  
(Specify: \_\_\_\_\_)

517

527

537

547

557

- B. WHEN WAS THE LAST TIME PRIOR TO THE INCIDENT OR EVENT THAT YOU RECEIVED SERVICES?

Month/Year

56-59



CARD 07-08

QUESTIONS 86-91 REFER TO THE PERIOD OF TIME SINCE THE INCIDENT OR EVENT (THAT IS, THE PERIOD FROM SHORTLY BEFORE FEB. 1, 1978 UP TO THE PRESENT TIME).

DO NOT  
WRITE IN  
THIS SPACE

86. SINCE THIS INCIDENT OR EVENT, WHICH OF THE FOLLOWING SERVICES HAVE YOU RECEIVED FROM SOCIAL ACTIONS? (IF YOU RECEIVED SERVICES FROM MORE THAN ONE PROGRAM, ANSWER FOR ALL SERVICES YOU RECEIVED FROM SOCIAL ACTIONS.)

(Circle all that apply)

- |                                                                                                |    |        |
|------------------------------------------------------------------------------------------------|----|--------|
| Alcohol Awareness Seminars . . . . .                                                           | 01 | 60-61/ |
| Group sessions or counseling . . . . .                                                         | 02 | 62-63/ |
| Individual counseling sessions . . . . .                                                       | 03 | 64-65/ |
| Family therapy--where you were seen together<br>with your wife or other family members . . . . | 04 | 66-67/ |
| Antabuse (Disulfiram). . . . .                                                                 | 05 | 68-69/ |
| Other drugs. . . . .                                                                           | 06 | 70-71/ |
| Recreational therapy--like sports, games,<br>or field trips . . . . .                          | 07 | 72-73/ |
| Occupational therapy--learning skills,<br>crafts, or hobbies . . . . .                         | 08 | 74-75/ |
| Relaxation therapy--learning ways to relax<br>without using alcohol or drugs . . . . .         | 09 | 76-77/ |
| Counseling on health, diet and eating habits . .                                               | 10 | 78-79/ |
| Other. . . . .                                                                                 | 11 | 80-81/ |

(Specify: \_\_\_\_\_)

- I have not received services from Social  
Actions since this incident. . . . . 12

Go to  
Question 101  
on Page 5

- A. WHICH OF THESE SERVICES, IF ANY, DID YOU RECEIVE DURING THE  
PAST YEAR (BACK TO ONE YEAR AGO TODAY)?

(Circle all that apply. Enter the  
number of counseling sessions  
received.)

- |                                         |   |                   |
|-----------------------------------------|---|-------------------|
| Alcohol Awareness Seminars. . . . .     | 1 |                   |
| Antabuse (Disulfiram). . . . .          | 2 |                   |
| Group sessions or counseling. . . . .   | 3 | ◆ Sessions: _____ |
| Individual counseling sessions. . . . . | 4 | ◆ Sessions: _____ |
| Other. . . . .                          | 5 |                   |

(Specify: \_\_\_\_\_)

- I didn't receive any Social Actions  
services during the past year. . . . . 6

87. SINCE THE INCIDENT OR EVENT, HOW MANY GROUP SESSIONS HAVE YOU ATTENDED AT SOCIAL ACTIONS?

Number of group sessions: \_\_\_\_\_

(If none, write "0" and go to Question 88.)

A. HOW MANY OF THESE GROUP SESSIONS WERE HELD DURING YOUR DUTY SHIFT?

Number of sessions during duty: \_\_\_\_\_

(If none, write "0")

B. ON THE AVERAGE, HOW LONG DID EACH GROUP SESSION LAST?

Hours: \_\_\_\_\_ Minutes: \_\_\_\_\_

C. DID YOU FIND THESE GROUP SESSIONS HELPFUL TO YOU?

(Circle one)

Yes, they were helpful to me for a drinking problem. . . . . 1

Yes, they were helpful to me for another problem . . . . . 2

Yes, they were helpful to me for both a drinking problem and another problem. . . 3

No, they were not helpful to me . . . . . 4

88. SINCE THE INCIDENT OR EVENT, HOW MANY INDIVIDUAL COUNSELING SESSIONS HAVE YOU ATTENDED AT SOCIAL ACTIONS?

Number of individual sessions: \_\_\_\_\_

(If none, write "0" and go to Question 89.)

A. HOW MANY OF THESE INDIVIDUAL COUNSELING SESSIONS WERE HELD DURING YOUR DUTY SHIFT?

Number of sessions during duty: \_\_\_\_\_

(If none, write "0")

B. ON THE AVERAGE, HOW LONG DID EACH INDIVIDUAL SESSION LAST?

Hours: \_\_\_\_\_ Minutes: \_\_\_\_\_

C. DID YOU FIND THESE INDIVIDUAL SESSIONS HELPFUL TO YOU?

(Circle one)

Yes, they were helpful to me for a drinking problem. . . . . 1

Yes, they were helpful to me for another problem . . . . . 2

Yes, they were helpful to me for both a drinking problem and another problem. . . 3

No, they were not helpful to me . . . . . 4

CARD 08

DO NOT  
WRITE IN  
THIS SPACE

89. SINCE THE INCIDENT OR EVENT THAT OCCURRED SHORTLY BEFORE FEB. 1, 1978, WERE YOU HOSPITALIZED FOR DETOXIFICATION?

(Circle one)

- Yes, at a Hospital Alcohol Treatment  
Center . . . . . 1  
Yes, but not at a Hospital Alcohol  
Treatment Center . . . . . 2  
No . . . . . 3

32/

90. SINCE THE INCIDENT OR EVENT, HAVE YOU ENTERED AN AIR FORCE HOSPITAL ALCOHOL TREATMENT CENTER AS A PATIENT?

(Circle one)

- Yes. . . . . 1 ➔ Go to Question 91  
No . . . . . 2 ➔ Go to Question 96  
on Page 49

32/

91. WERE YOU TRANSFERRED FROM SOCIAL ACTIONS TO THE ALCOHOL TREATMENT CENTER?

(Circle one)

- Yes, I was transferred from Social  
Actions to the Alcohol Treatment  
Center . . . . . 1 ➔ Answer A  
No, I was transferred from another  
place (Mental Health, hospital, etc.). 2 }  
No, I entered the Alcohol Treatment  
Center directly. . . . . 3 } Go to  
Question 92

33/

- A. WHAT WAS THE REASON YOU WERE TRANSFERRED TO THE ALCOHOL TREATMENT CENTER?

(Circle all that apply)

- I needed detoxification services . . . . . 1  
I needed inpatient medical treatment . . . 2  
I was not making progress at Social  
Actions, in my opinion . . . . . 3  
I was not making progress at Social  
Actions, in the opinion of others. . . . 4  
I experienced additional alcohol-related  
problems while in the Social Actions  
program. . . . . 5  
(Specify: \_\_\_\_\_)  
Other reason . . . . . 6  
(Specify: \_\_\_\_\_)

34/

35/

36/

37/

38/

39/

CARD 08

92. BETWEEN THE DATE OF THE INCIDENT OR EVENT AND YOUR ADMISSION TO THE ALCOHOL TREATMENT CENTER, DID YOU RECEIVE SERVICES FROM SOCIAL ACTIONS? (ANSWER FOR THE PERIOD BEFORE YOUR FIRST ADMISSION IF YOU HAVE ENTERED AN ALCOHOL TREATMENT CENTER MORE THAN ONCE SINCE THE INCIDENT.)

(Circle one)

Yes . . . . . 1 ➡ Go to Question 93  
 No. . . . . 2 ➡ Go to Question 96  
on Page 49

DO NOT  
WRITE IN  
THIS SPACE

40/

93. WHICH OF THE FOLLOWING SERVICES DID YOU RECEIVE FROM SOCIAL ACTIONS DURING THIS PERIOD?

(Circle all that apply)

Alcohol Awareness Seminars. . . . .	01	41-42/
Group sessions or counseling. . . . .	02	43-44/
Individual counseling sessions. . . . .	03	45-46/
Family therapy--where you were seen together with your wife or other family members . . . . .	04	47-48/
Antabuse (Disulfiram) . . . . .	05	49-50/
Other drugs . . . . .	06	51-52/
Recreational therapy--like sports, games or field trips . . . . .	07	53-54/
Occupational therapy--learning skills, crafts or hobbies . . . . .	08	55-56/
Relaxation therapy--learning ways to relax without using alcohol or drugs . . . . .	09	57-58/
Counseling on health, diet and eating habits. . . . .	10	59-60/
Other . . . . .	11	61-62/

(Please describe: \_\_\_\_\_  
 \_\_\_\_\_ )

CARD 08

DO NOT  
WRITE IN  
THIS SPACE

94. HOW MANY GROUP SESSIONS DID YOU ATTEND AT SOCIAL ACTIONS DURING THIS PERIOD?

Number of group sessions: \_\_\_\_\_  
(If none, write "0"  
and go to Question 95)

63-64/

A. HOW MANY OF THESE GROUP SESSIONS WERE HELD DURING YOUR DUTY SHIFT?

Number of sessions during duty: \_\_\_\_\_  
(If none, write "0")

65-66/

B. ON THE AVERAGE, HOW LONG DID EACH GROUP SESSION LAST?

Hours: \_\_\_\_\_ Minutes: \_\_\_\_\_

67/

68-69/

95. HOW MANY INDIVIDUAL COUNSELING SESSIONS DID YOU ATTEND AT SOCIAL ACTIONS DURING THIS PERIOD?

Number of individual sessions: \_\_\_\_\_  
(If none, write "0"  
and go to Question 96)

70-71/

A. HOW MANY OF THESE INDIVIDUAL COUNSELING SESSIONS WERE HELD DURING YOUR DUTY SHIFT?

Number of sessions during duty: \_\_\_\_\_  
(If none, write "0")

72-73/

B. ON THE AVERAGE, HOW LONG DID EACH INDIVIDUAL SESSION LAST?

Hours: \_\_\_\_\_ Minutes: \_\_\_\_\_

74/

75-76/

CARD 09

DO NOT  
WRITE IN  
THIS SPACE

96. OVERALL, HOW MUCH WOULD YOU SAY THE SOCIAL ACTIONS SERVICES YOU RECEIVED SINCE THE INCIDENT OR EVENT HELPED YOU?

(Circle one)

Helped very much. . . . . 1  
 Helped somewhat. . . . . 2  
 Helped only a little. . . . . 3  
 Didn't help at all. . . . . 4

- A. PLEASE DESCRIBE WHAT WAS MOST HELPFUL ABOUT THE SOCIAL ACTIONS SERVICES:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

9/  
10-11/

12-13/

14-15/

- B. PLEASE DESCRIBE HOW THE SOCIAL ACTIONS SERVICES MIGHT HAVE BEEN MORE HELPFUL:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

16-17/

18-19/

20-21/

97. WAS YOUR PARTICIPATION IN THE SOCIAL ACTIONS PROGRAM(S) HARMFUL IN ANY WAY?

(Circle one)

Yes. . . . . 1 ☐ **Answer A**  
 No . . . . . 2 ☐ **Go to Question 98**

22/

- A. PLEASE DESCRIBE WHY YOUR PARTICIPATION IN THE PROGRAM WAS HARMFUL:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

23-24/

25-26/

27-28/

CARD 09

98. OVERALL, WAS YOUR PARTICIPATION IN THE SOCIAL ACTIONS PROGRAM(S) MORE  
HELPFUL OR MORE HARMFUL TO YOU?

(Circle one)

More helpful. . . . . 1

Neutral . . . . . 2

More harmful. . . . . 3

DO NOT  
WRITE IN  
THIS SPACE

29/

99. DID SOCIAL ACTIONS TRY TO GET YOU TO STOP DRINKING ALTOGETHER?

(Circle one)

Yes . . . . . 1

No. . . . . 2

30/

100. IF YOU HAVE STOPPED DRINKING ALTOGETHER, HOW MUCH DID SOCIAL ACTIONS  
INFLUENCE YOU TO STOP?

(Circle one)

Influenced me very much. . . . . 1

Influenced me somewhat . . . . . 2

Did not influence me. . . . . 3

I have not stopped drinking  
altogether. . . . . 4

31/

CARD 09

101. HAVE YOU EVER BEEN IN A HOSPITAL ALCOHOL TREATMENT CENTER AS A PATIENT?

(Circle one)

Yes, in an Air Force Hospital Alcohol  
Treatment Center. . . . . 1Yes, in a non-Air Force Hospital  
Alcohol Treatment Center. . . . . 2No, I have not been in a Hospital  
Alcohol Treatment Center. . . . . 3Go to  
Question 102Go to Question  
110 on Page 55DO NOT  
WRITE IN  
THIS SPACE

32/

102. PLEASE INDICATE EACH DATE YOU WERE ADMITTED TO A HOSPITAL ALCOHOL  
TREATMENT CENTER:(Fill in all dates that apply)

(Check one)

(Write in name  
of hospital)

Last admission:

Month/Year

1

☐Air  
Force  
Hospital

2

☐Non-Air  
Force  
Hospital

Hospital

33-36/

37/

38-39/

Prior admissions:

Month/Year

1

☐Air  
Force  
Hospital

2

☐Non-Air  
Force  
Hospital

Hospital

40-43/

44/

45-46/

Month/Year

1

☐Air  
Force  
Hospital

2

☐Non-Air  
Force  
Hospital

Hospital

47-50/

51/

52-53/



THE FOLLOWING QUESTIONS CONCERN THE PERIOD OF TIME SINCE THE INCIDENT OR EVENT THAT OCCURRED SHORTLY BEFORE FEB. 1, 1978. IF YOU HAVE NOT BEEN ADMITTED TO AN ALCOHOL TREATMENT CENTER (MILITARY OR CIVILIAN) SINCE THIS INCIDENT, SKIP TO QUESTION 110 ON PAGE 55.

DO NOT  
WRITE IN  
THIS SPACE

103. SINCE THIS INCIDENT, WHICH OF THE FOLLOWING SERVICES DID YOU RECEIVE FROM THE ALCOHOL TREATMENT CENTER(S)?

(Circle all that apply)

Group sessions or counseling. . . . .	01	54-55/
Individual counseling sessions. . . . .	02	56-57/
Lectures or education about alcohol . . . . .	03	58-59/
Family therapy - where you were seen together with your wife or other family members. . . .	04	60-61/
Detoxification. . . . .	05	62-63/
Antabuse (Disulfiram) . . . . .	06	64-65/
Other drugs . . . . .	07	66-67/
Recreational therapy - like sports, games or field trips. . . . .	08	68-69/
Occupational therapy - learning skills, crafts or hobbies. . . . .	09	70-71/
Relaxation therapy - learning ways to relax without using alcohol or drugs . . . . .	10	72-73/
Counseling on health, diet and eating habits . .	11	74-75/
Other. . . . .	12	76-77/

(Please describe: \_\_\_\_\_)

\_\_\_\_\_ )

CARD 10

DO NOT  
WRITE IN  
THIS SPACE

104. HOW MUCH WOULD YOU SAY THE ALCOHOL TREATMENT CENTER(S) YOU HAVE BEEN  
IN SINCE THE INCIDENT OR EVENT HELPED YOU?

(Circle one)

- Helped very much. . . . . 1  
 Helped somewhat . . . . . 2  
 Helped only a little. . . . . 3  
 Didn't help at all. . . . . 4

9/

A. PLEASE DESCRIBE WHAT WAS MOST HELPFUL ABOUT THE ALCOHOL TREATMENT  
CENTER(S):

10-11/

12-13/

14-15/

B. PLEASE DESCRIBE HOW THE ALCOHOL TREATMENT CENTER(S) MIGHT HAVE  
BEEN MORE HELPFUL:

16-17/

18-19/

20-21/

105. WAS YOUR PARTICIPATION IN THE ALCOHOL TREATMENT CENTER PROGRAM(S)  
HARMFUL IN ANY WAY?

(Circle one)

- Yes. . . . . 1 ♦ Answer A  
 No . . . . . 2 ♦ Go to Question 106

22/

A. PLEASE DESCRIBE WHY YOUR PARTICIPATION IN THE PROGRAM(S) WAS  
HARMFUL:

23-24/

25-26/

27-28/

CARD 10

DO NOT  
WRITE IN  
THIS SPACE

106. OVERALL, WAS YOUR PARTICIPATION IN THE ALCOHOL TREATMENT CENTER PROGRAM(S) MORE HELPFUL OR MORE HARMFUL TO YOU?

(Circle one)

More helpful . . . . . 1  
Neutral . . . . . 2  
More harmful . . . . . 3

29/

107. DID THE ALCOHOL TREATMENT CENTER STAFF TRY TO GET YOU TO STOP DRINKING ALTOGETHER?

(Circle one)

Yes . . . . . 1  
No . . . . . 2

30/

108. IF YOU HAVE STOPPED DRINKING ALTOGETHER, HOW MUCH DID THE ALCOHOL TREATMENT CENTER STAFF INFLUENCE YOU TO STOP?

(Circle one)

Influenced me very much . . . . . 1  
Influenced me somewhat . . . . . 2  
Did not influence me at all . . . . . 3  
I have not stopped drinking altogether . . . 4

31/

109. AFTER LEAVING THE ALCOHOL TREATMENT CENTER(S), DID YOU RECEIVE ACTIVE REHABILITATION SERVICES FROM YOUR LOCAL SOCIAL ACTIONS PROGRAM?

(Circle one)

Yes . . . . . 1  
No . . . . . 2

32/

CARD 10

110. SINCE THE INCIDENT OR EVENT THAT OCCURRED SHORTLY BEFORE FEB. 1, 1978, HAVE YOU HAD ANOTHER ALCOHOL-RELATED INCIDENT OR EVENT?

(Circle one)

Yes . . . . . 1 ➡ Answer A through C  
 No . . . . . 2 ➡ Go to Question 111

DO NOT  
WRITE IN  
THIS SPACE

33/

- A. BRIEFLY DESCRIBE THIS NEW INCIDENT OR EVENT:

---



---



---

34-35/

36-37/

38-39/

- B. WHEN DID THIS NEW INCIDENT OR EVENT OCCUR?

Month/Year

40-43/

- C. HOW DID THIS INCIDENT OR EVENT AFFECT YOUR INVOLVEMENT WITH AN AIR FORCE ALCOHOL PROGRAM?

(Circle all that apply)

It caused me to re-enter a Social Actions  
 program. . . . . 1  
 It caused Social Actions to change or  
 intensify my treatment program . . . . . 2  
 It caused me to enter a Hospital Alcohol  
 Treatment Center . . . . . 3  
 It led to my separation from the Air Force . 4  
 It did not affect my involvement with an  
 Air Force alcohol program. . . . . 5

44/

45/

46/

47/

48/

CARD 10

DO NOT  
WRITE IN  
THIS SPACE

111. HAVE YOU BEEN TO ANY ALCOHOLICS ANONYMOUS MEETINGS--AA MEETINGS--  
SINCE FEB. 1, 1978?

(Circle one)

Yes. . . . . 1 ☐ Answer A and BNo . . . . . 2 ☐ Go to Question 112

49/

A. HOW MANY MEETINGS HAVE YOU BEEN TO SINCE FEB. 1, 1978?

Number of meetings: \_\_\_\_\_

50-51/

B. How many of these meetings have you been to in the past year?

Number of meetings: \_\_\_\_\_  
(If none, write "0")

112. SINCE FEB. 1, 1978, HAVE YOU RECEIVED OUTPATIENT SERVICES FOR  
ALCOHOL-RELATED PROBLEMS FROM NON-AIR FORCE PROGRAMS (NOT INCLUDING  
AA)?

(Circle one)

Yes. . . . . 1 ☐ Answer A through DNo . . . . . 2 ☐ Go to Question 113

52/

A. HOW MANY COUNSELING SESSIONS DID YOU ATTEND?

Number of sessions: \_\_\_\_\_  
(If none, write "0")

53-54/

B. DID YOU RECEIVE ANTABUSE (DISULFIRAM) OR OTHER DRUGS?

(Circle one)

Yes. . . . . 1

55/

(Enter names of drugs: \_\_\_\_\_)

56/

(Enter date last received: \_\_\_\_\_  
Month/Year)

No . . . . . 2

C. DID YOU RECEIVE OTHER SERVICES?

(Circle one)

Yes. . . . . 1

57/

(Please specify: \_\_\_\_\_)

58

(Enter date last received: \_\_\_\_\_  
Month/Year)

No . . . . . 2

D. HOW MANY COUNSELING SESSIONS DID YOU ATTEND DURING THE PAST YEAR  
(BACK TO ONE YEAR AGO TODAY)?

Number of sessions: \_\_\_\_\_  
(If none, write "0")

CAPD

DO NOT  
WRITE IN  
THIS SPACE

113. DID YOU MAKE A DECISION SINCE FEB. 1, 1978 TO STOP OR REDUCE YOUR DRINKING?

(Circle one)

Yes . . . . . 1 ☐ Answer A and B

No . . . . . 2 ☐ Go to question 114

59/

A. WHAT WAS THE MOST IMPORTANT REASON FOR THAT DECISION?

(Circle one)

I wanted to clear my official Air Force record . . . . . 1

60/

Because of my health . . . . . 2

61/

Because of my family and social life . . . . . 3

62/

Because of my work . . . . . 4

Because of my finances . . . . . 5

Other reason . . . . . 6

(Please describe: \_\_\_\_\_)

\_\_\_\_\_  
\_\_\_\_\_ )

B. WHEN DID YOU DECIDE TO STOP OR REDUCE YOUR DRINKING?

(Circle one)

Before I entered an Air Force alcohol program. . . . . 1

63/

While I was in an Air Force Social Actions alcohol program. . . . . 2

While I was in an Air Force Hospital Alcohol Treatment Center . . . . . 3

After I left an Air Force alcohol program. . . . . 4

After I left the Air Force . . . . . 5

CARD 10

114. WHAT DO YOU THINK YOU WILL ACTUALLY DO IN THE NEXT FEW MONTHS ABOUT YOUR DRINKING? DO YOU THINK YOU WILL:

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

- Stop drinking altogether . . . . . 1  
Cut down, but not stop altogether. . 2  
Drink the same . . . . . 3  
Drink more . . . . . 4  
Not sure . . . . . 5  
I have stopped drinking  
altogether . . . . . 6

64/

115. THIS IS A QUESTION ABOUT HOW YOU THINK THINGS WILL GO IN THE FUTURE. SOMETIMES PEOPLE REPORT THAT DRINKING HAS A HARMFUL EFFECT ON CERTAIN THINGS IN THEIR LIFE. IN THE FUTURE, IF YOU CONTINUE TO DRINK LIKE YOU HAVE BEEN IN THE PAST FEW MONTHS, HOW MUCH DO YOU THINK YOUR DRINKING WILL HAVE A HARMFUL EFFECT ON THE FOLLOWING?

(IF YOU DON'T DRINK AT ALL, HOW HARMFUL WOULD A RETURN TO DRINKING BE ON THE FOLLOWING?)

(Circle one for each item A through G)

	Very Much	Somewhat	Not very Much	Not at All	
A. Your friendships and social life?	1	2	3	4	65/
B. Your physical health?	1	2	3	4	66/
C. Your mental well being?	1	2	3	4	67/
D. Your marriage or home life?	1	2	3	4	68/
E. Your job and assignment?	1	2	3	4	69/
F. Your money or finances?	1	2	3	4	70/
G. Your Air Force (or civilian) career?	1	2	3	4	71/

CARD 10-11

116. HERE ARE SOME STATEMENTS PEOPLE HAVE MADE ABOUT DRINKING. PLEASE MARK FOR EACH STATEMENT WHETHER YOU STRONGLY AGREE, AGREE, ARE NEUTRAL, DISAGREE, OR STRONGLY DISAGREE.

DO NOT  
WRITE IN  
THIS SPACE

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	
A. A party isn't a party unless alcoholic drinks are served . . . . . 1	2	3	4	5	72/	
B. Many of the people in my unit think there is something wrong with a person who doesn't drink. . . 1	2	3	4	5	73/	
C. Even a moderate amount of drinking damages the body. . . . . 1	2	3	4	5	74/	
D. There is really no cure for alcoholism. . . . . 1	2	3	4	5	75/	
E. If an alcoholic expects to get better, he/she must stop drinking entirely. . . . . 1	2	3	4	5	76/	
F. It's all right to get drunk once in a while as long as it doesn't get to be a habit. . . . . 1	2	3	4	5	9/	
G. It's a good thing that the Air Force has started a policy to deglamorize alcohol. . . . . 1	2	3	4	5	10/	
H. Every military man should know how to hold his liquor. . . . . 1	2	3	4	5	11/	
I. It's all right to have a drink or two at lunch on duty days . . . . . 1	2	3	4	5	12/	
J. Drinking together helps keep up the spirit and morale of a unit . . . . . 1	2	3	4	5	13/	
K. Alcoholism is basically a sign of moral weakness . . . . . 1	2	3	4	5	14/	

CARD 11



AD-A112 787

RAND CORP SANTA MONICA CA

F/8 6/5

EFFECTIVENESS AND COST OF ALCOHOL REHABILITATION IN THE UNITED --ETC(U)

DEC 81 B R ORVIS, D J ARMOR, C E WILLIAMS

F49620-82-C-0018

UNCLASSIFIED RAND/R-2813-AF

NL

3 of 3

AD-A  
11 2 787

END

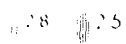
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04-82

DTIC



1.0



1.25



1.5



1.1



2.0



1.8



1.25



1.4



1.6

Resolution Test Chart  
1.0 1.1 1.25 1.4 1.5 1.6 1.8 2.0 2.2 2.5

CARD 11

DO NOT  
WRITE IN  
THIS SPACE

117. IF YOU HAD JUST PARTICIPATED IN A HAPPY HOUR OR COCKTAIL PARTY THAT LASTED TWO HOURS, HOW MUCH COULD YOU DRINK AND FEEL SAFE DRIVING AN AUTOMOBILE?

(Circle one)

0 drinks . . . . .	01
1 drink (a shot, regular mixed drink, a beer or glass of wine) . . . . .	02
2 drinks . . . . .	03
3 drinks . . . . .	04
4 drinks . . . . .	05
5 drinks . . . . .	06
6 drinks . . . . .	07
7 drinks . . . . .	08
8 drinks . . . . .	09
9 drinks . . . . .	10
10 drinks . . . . .	11
More than 10 drinks . . . . .	12

15-16/

CARD 11

DO NOT  
WRITE IN  
THIS SPACE

118. HERE ARE SOME STATEMENTS ABOUT THE EFFECTS OF ALCOHOL. PLEASE MARK FOR EACH STATEMENT WHETHER YOU BELIEVE IT IS TRUE OR FALSE.

	<u>True</u>	<u>False</u>	
A. Drinking too much liquor quickly can kill a person. . . . .	1	2	17/
B. Forgetting what happened while drinking is a sign of alcoholism. . . . .	1	2	18/
C. One can of beer has the same amount of alcohol as one shot of whiskey. . . . .	1	2	19/
D. Drinking black coffee and dousing your head with cold water will help you sober up quickly. .	1	2	20/
E. As long as you eat a balanced diet, drinking won't damage your body. . . . .	1	2	21/
F. A person can become physically addicted to alcohol . . . . .	1	2	22/
G. If you stick to drinking beer, you won't become an alcoholic . . . . .	1	2	23/
H. The best cure for a hangover is a drink . . . . .	1	2	24/

119. DO YOU THINK THERE ARE SOME PEOPLE WHO ARE SO SENSITIVE TO ALCOHOL THAT THEY CAN'T STOP DRINKING AFTER JUST ONE OR TWO DRINKS?

(Circle one)

Yes. . . . . 1

No . . . . . 2

25/

120. DO YOU THINK THAT ALCOHOLISM IS A DISEASE FROM WHICH A PERSON CAN NEVER COMPLETELY RECOVER?

(Circle one)

Yes. . . . . 1

No . . . . . 2

26/

CARD 11

DO NOT  
WRITE IN  
THIS SPACE

121. DO YOU THINK THAT A PERSON WHO WAS ONCE AN ALCOHOLIC WILL ALWAYS BE AN ALCOHOLIC?

(Circle one)

Yes . . . . . 1

No . . . . . 2

27/

122. DO YOU THINK THAT AN ALCOHOLIC CAN EVER GO BACK TO MODERATE DRINKING AND NOT START DRINKING TOO MUCH?

(Circle one)

Yes . . . . . 1

No . . . . . 2

28/

123. DO YOU FEEL YOU YOURSELF ARE OR HAVE EVER BEEN AN ALCOHOLIC?

(Circle one)

Yes, I am now . . . . . 1

Yes, I have been in the past . 2

No . . . . . 3

29/

IF YOU ARE NOT NOW IN THE AIR FORCE, please go right on to the next page.

IF YOU ARE CURRENTLY IN THE AIR FORCE, you have now completed this questionnaire. Thank you for taking the time to fill it out.

Please check to see if you have answered all  
the questions that pertain to you.

Seal the questionnaire in the postpaid  
envelope.

ANSWER THESE QUESTIONS IF YOU ARE NOT PRESENTLY IN THE AIR FORCE

CARD 11  
DO NOT  
WRITE IN  
THIS SPACE

124. WHAT WAS THE DATE OF YOUR SEPARATION FROM THE AIR FORCE? \_\_\_\_\_  
Month / Year

30-33/

125. WHAT KIND OF DISCHARGE DO YOU HAVE?

(Circle one)

Honorable. . . . . 1  
Discharge Under Honorable Conditions . 2  
Discharge Under Other Than Honorable  
Conditions . . . . . 3  
Bad Conduct. . . . . 4

34/

126. HOW LONG DID YOU SERVE IN THE AIR FORCE?

Number of years: \_\_\_\_\_

35-36/

127. ARE YOU RETIRED FROM THE AIR FORCE?

(Circle one)

Yes, I retired . . . . . 1  
No, I separated before retirement. . . 2

37/

128. WAS YOUR SEPARATION A NORMAL END OF TERM OF SERVICE (ETS)?

(Circle one)

Yes, normal ETS. . . . . 1  
No, not a normal ETS . . . . . 2

38/

129. WERE YOU ELIGIBLE FOR REENLISTMENT WHEN YOU LEFT THE AIR FORCE?

(Circle one)

Yes . . . . . 1  
 No . . . . . 2  
 Don't know . . . . . 3  
 Does not apply, I was an officer . . 4

DO NOT  
 WRITE IN  
 THIS SPACE

39/

130. IN YOUR OPINION, WAS YOUR SEPARATION RELATED IN ANY WAY TO AN ALCOHOL PROBLEM?

(Circle one)

Yes . . . . . 1 ☐ Answer A  
 No . . . . . 2 ☐ Go to Question 131

40/

A. PLEASE EXPLAIN: \_\_\_\_\_

41-42/

43-44/

45-46/

131. WHAT WAS YOUR LAST PERMANENT DUTY STATION?

\_\_\_\_\_ Air Force Base \_\_\_\_\_ State (or country if not in U.S.)

47-49/

132. HOW LONG WERE YOU AT YOUR LAST DUTY STATION? (COUNT ONLY THE TIME IN YOUR LAST TOUR.)

Number of MONTHS at last duty station: \_\_\_\_\_

50-51/

133. BEFORE LEAVING THE AIR FORCE, HOW MANY PEOPLE - OFFICERS, AIRMEN AND CIVILIANS - DID YOU NORMALLY SUPERVISE? (COUNT ONLY THOSE WHO REPORTED DIRECTLY TO YOU AND WHOSE PERFORMANCE RATINGS OR EFFICIENCY REPORTS YOU WROTE.)

Number of people supervised: \_\_\_\_\_  
 (If none, write "0")

52-53/

CARD 11

DO NOT  
WRITE IN  
THIS SPACE

134. WHAT WAS YOUR ACTIVE DUTY PAY GRADE JUST BEFORE LEAVING THE AIR FORCE?

O- \_\_\_\_\_ (Officer)

or

E- \_\_\_\_\_ (Enlisted)

54-55/

135. WHAT WAS YOUR LAST OVERALL APR/OER RATING (PERFORMANCE/EFFICIENCY RATING)?

APR/OER Rating: \_\_\_\_\_

56/

A. WHEN DID YOU RECEIVE THIS LAST RATING?

Month / Year

57-60/

136. WAS YOUR SPOUSE WITH YOU AT YOUR LAST DUTY STATION?

(Circle one)

Yes, my spouse was with me. . . . . 1

No, my spouse was not with me . . . . . 2

I was not married at the time . . . . . 3

61/

137. DURING THE PAST YEAR, UNTIL YOU LEFT THE AIR FORCE, HOW MANY MONTHS WERE YOU STATIONED AWAY FROM YOUR SPOUSE?

Number of months: \_\_\_\_\_

(If none, write "0")

I was not in the Air Force during the past year. . . 98

I was not married during that time . . . . . 99

62-63/

138. WERE YOU DEMOTED DURING THE PAST YEAR?

(Circle one)

Yes. . . . . 1

No . . . . . 2

I was not in the Air Force  
during the past year . . . . . 3

Answer A and B

Go to Question 139

64/

A. WHAT WAS THE DATE YOU WERE DEMOTED? (IF YOU WERE DEMOTED MORE THAN ONCE DURING THIS PERIOD OF TIME, ENTER THE DATE OF YOUR LAST DEMOTION.)

Date of demotion: \_\_\_\_\_

Month/Year

65-68/

B. DID YOUR LAST DEMOTION RESULT FROM A DRINKING-RELATED INCIDENT THAT HAPPENED DURING THE PAST YEAR?

(Circle one)

Yes. . . . . 1

No . . . . . 2

69/



## 139. ARE YOU CURRENTLY EMPLOYED?

DO NOT  
WRITE IN  
THIS SPACE

(Circle one)

- Yes, I am working full time. . . . . 1  
 Yes, I am working part time. . . . . 2  
 Yes, I work at odd jobs. . . . . 3  
 No, I am not employed. . . . . 4

Go to  
Question 140

Answer A and B

70/

## A. HAVE YOU BEEN LOOKING FOR WORK DURING THE PAST 30 DAYS?

(Circle one)

- Yes. . . . . 1  
 No . . . . . 2

Go to Question 140

Answer B

71/

## B. WHAT IS THE MAIN REASON YOU HAVEN'T BEEN LOOKING FOR WORK?

(Circle one)

- Homemaker. . . . . 01  
 Student. . . . . 02  
 Retired/too old. . . . . 03  
 Illness or disability not related  
 to alcohol. . . . . 04  
 Drinking problem (including illness  
 related to alcohol). . . . . 05  
 Institutionalized. . . . . 06  
 Don't want a job/more work . . . . . 07  
 No job available . . . . . 08  
 In this location only temporarily/  
 intend to move on. . . . . 09  
 Have independent income/no need to work. . 10  
 Temporarily laid off . . . . . 11  
 Other. . . . . 12

(Please describe: \_\_\_\_\_)

72-73

CARD 11-12

DO NOT  
WRITE IN  
THIS SPACE

140. HOW MANY MONTHS HAVE YOU WORKED SINCE YOU LEFT THE AIR FORCE?

Number of months: \_\_\_\_\_  
(If none, write "0")

74-75/

141. WHERE DO YOU NOW LIVE?

(Circle one)

- I live in a home I own . . . . . 1  
 I live in a rented home or apartment . 2  
 I live in a mobile home. . . . . 3  
 I live with my parents . . . . . 4  
 I live with friends or other family. . 5  
 I live in a boarding house or hotel. . 6  
 I have another living arrangement. . . 7  
 (Please describe: \_\_\_\_\_  
 \_\_\_\_\_)

76/

CARD 12

142. SINCE LEAVING THE AIR FORCE, WHAT TREATMENT HAVE YOU HAD FOR ALCOHOL PROBLEMS?

(Circle all that apply)

- None since I left the Air Force. . . . 1  
 Veterans Administration outpatient  
 program or clinic. . . . . 2  
 Veterans Administration Hospital  
 Alcohol Treatment Center . . . . . 3  
 State Mental Hospital. . . . . 4  
 Another hospital treatment center. . . 5  
 A Community Mental Health Center . . . 6  
 A counseling program at my work. . . . 7  
 Vocational rehabilitation counseling . 8  
 Other. . . . . 9  
 (Please describe: \_\_\_\_\_  
 \_\_\_\_\_)

9/

10/

11/

12/

13/

14/

15/

16/

17/

CARD 12

DO NOT  
WRITE IN  
THIS SPACE

143. SINCE LEAVING THE AIR FORCE, APPROXIMATELY HOW MANY DAYS HAVE YOU BEEN HOSPITALIZED FOR AN ALCOHOL PROBLEM?

Number of days: \_\_\_\_\_  
(If none, write "0")

18-19/

144. SINCE LEAVING THE AIR FORCE, HAVE YOUR DRINKING HABITS CHANGED?

(Circle one)

Yes, I drink more than when I was in  
the Air Force. . . . . 1 ♦ Answer A

Yes, I drink less than when I was in  
the Air Force. . . . . 2 ♦ Answer B

No, I drink about the same as when I  
was in the Air Force . . . . . 3

20/

- A. WHY DO YOU DRINK MORE THAN YOU DRANK IN THE AIR FORCE?

---

---

---

---

21-22/

23-24/

25-26/

- B. WHY DO YOU DRINK LESS THAN YOU DRANK IN THE AIR FORCE?

---

---

---

---

27-28/

29-30/

31-32/

Thank you for completing this form.

Please check to see that you have answered  
all the questions which pertain to you.

Seal the questionnaire in the postpaid envelope  
and mail it immediately to The Ranc Corporation.

## **Appendix D**

### **SURVEY ADMINISTRATION MATERIALS**

The staff members at the 20 study locations were responsible for identifying the clients eligible for the evaluation, according to the criteria specified by Rand. To inform the prospective participant about the study procedures, a staff member read a brief statement aloud. If the client then agreed to participate, he completed the admission questionnaire. The statement read to the prospective respondent is reproduced below.

#### **STATEMENT TO CLIENT**

The Rand Corporation is conducting a study for the Air Force about drinking practices and about people who enter hospital Alcohol Treatment Centers (Social Actions Programs) because of problems that may be related to drinking.

Each participant in the study will fill out this questionnaire and mail it back to The Rand Corporation. This way, your answers are a confidential matter between you and the Rand research staff. Your questionnaire will be identified with a computer code number, but neither the hospital (Social Actions) personnel nor anyone else in the Air Force will ever be seeing your answers, nor will we be told what you have said. Names of individuals will never be used, and your answers will be used for statistical summaries only. The Rand team believes that this is the best way to collect the information since answers can be given freely without the possibility of negative consequences from anything you may say in the questionnaire.

After the chief of Social Actions had been personally contacted by a Rand representative to discuss the necessary arrangements for the followup survey, a letter confirming these arrangements was mailed to him. The letter included outlines for a telephone conversation to personally notify the study participants about the survey and for a letter to the participants' unit commanders to secure their release from duty for the survey. The respondent notification outline is reproduced on page 193. The outline for the unit commander notification letter is also shown on page 193.

### RESPONDENT NOTIFICATION OUTLINE

Each respondent selected for participation in the survey should be personally contacted by telephone and informed of the scheduling arrangements. The conversation should cover the following points:

1. Rand has scheduled the individual to participate in a survey of Social Actions activities which will be administered by a Rand representative at his base.
2. He was scheduled because he participated in the initial phase of this study, about one-two years ago.
3. As he may recall, the questionnaire he completed earlier stated that he could be recontacted to fill out a second, final survey form. This final survey will require approximately one hour to complete.
4. The survey session is scheduled for \_\_\_\_\_ hours on \_\_\_\_\_ 1979. He should report to Social Actions at \_\_\_\_\_ hours.
5. This study of Social Actions' activities is being conducted at the request of the Air Force. The individual's unit commander will be contacted by letter to secure his release from duty for the purpose of participating in the survey. The individual will receive a copy of this letter. The unit commander will verify the scheduling arrangements with the individual.

### UNIT COMMANDER NOTIFICATION LETTER

The suggested content of the unit commander notification letter is indicated below.

TO: \_\_\_\_\_ (Unit commander's name) DATE: \_\_\_\_\_  
 FROM: Social Actions Office  
 SUBJECT: Rand Corporation Study of Social Actions' Activities

1. The Rand Corporation is conducting a large-scale survey of Social Actions' activities. The study has been directed by HQ USAF, and reflects the on-going interests of Lieutenant General B. L. Davis (DCS MP). The success of the survey will be determined by the cooperation of each unit commander.
2. The site visit to \_\_\_\_\_ will be made on \_\_\_\_\_ 1979. The survey session is scheduled for \_\_\_\_\_ hours. Selected individuals should report to Social Actions at \_\_\_\_\_ hours.
3. Your organization has been tasked to provide personnel in accordance with the attached roster. The personnel were selected because they participated in the initial phase of this study. Therefore, all selected personnel will be required to attend the survey session. Substitutions of personnel will not be permitted. Rescheduling of any no-shows will require that the unit commander be recontacted by this office for a subsequent time period during the afternoon of \_\_\_\_\_.
4. The individuals selected for the survey will be contacted directly by (Social Actions chief) (SL). Each unit commander will verify scheduling arrangements with the personnel on the attached roster, and will confirm these arrangements with (Social Actions chief). If any selected individual is unable to attend the survey session, the reason (e.g., PCS, TDY, leave, etc.) must be given to (Social Actions chief).

FOR THE COMMANDER

Attachment: Roster of Selected Personnel

CHIEF, SOCIAL ACTIONS

When the study participants appeared at Social Actions for the followup survey session, they were escorted to a private room by the Rand representative. When all persons scheduled for the session had arrived, the representative delivered the following oral instructions.

Good morning. I'm \_\_\_\_\_ and I work for The Rand Corporation. In 1977, the Air Force asked Rand to conduct a study of Social Actions' programs. We designed a survey and asked Air Force personnel to administer the survey to all individuals who interacted with various programs. You probably remember completing such a questionnaire. You may also recall that the cover sheet of that questionnaire stated that we could get back to you later, to administer a second survey. That is why we have asked that you be here today—to complete the second and last questionnaire for the study.

Now, I want to take a minute to describe some of the procedures used in this study. Because the study calls for two questionnaires, we made a list of people like yourselves who participated in the first survey. We used the list to find you this time. Of course, after the study is finished this list will have no further purpose and, to protect your privacy, will be destroyed. Let me also make it clear that this survey is not only confidential, it is anonymous. I say this for three reasons: (1) no name will be attached to any questionnaire; (2) no individual questionnaire will be studied, instead the combined responses of all participants will be analyzed; and (3) no questionnaire will be given to the Air Force or to anyone else outside Rand. This will protect you from the possibility that the information you provide might be misused. I hope that now, understanding these procedures, you will feel free to answer the questionnaire completely and openly. This is very important, and we appreciate your cooperation.

Before you start working, let me make a couple of additional comments about procedure. It should take you about one hour to complete the questionnaire. If you have any questions at any time as you go through the survey booklet, please raise your hand and *I will be happy to come over and try to answer them.* When you've finished the questionnaire, please go over it quickly to make sure you have answered all the questions. Then, put the survey booklet in the envelope and seal it. I'll make a place here where you can stack the envelopes as you leave.

OK, I'd like you to read the front page of the questionnaire carefully and begin working now. Again, thank you for your cooperation.

When the respondents completed the questionnaire, they sealed it in an envelope provided for this purpose and left the envelope with the Rand representative. They were thanked for their cooperation, and were excused. After the last person had been excused, the representative checked his attendance roster to verify that all study participants at the base had appeared for the survey. At installations where one or more participants had not appeared, the representative so notified the chief of Social Actions. He gave the chief sealed survey packages for these individuals and a page containing instructions for administering the survey. The administration instructions are reproduced on page 195.

## SURVEY ADMINISTRATION INSTRUCTIONS

1. When the individual comes to take the survey, give him the sealed envelope with the number corresponding to his name (see list of no-shows). *It is very important that each respondent receive the correct questionnaire.* Escort the individual to the private room where he will complete the questionnaire. After he is seated, ask him to open the envelope and read the letter accompanying the questionnaire. Wait until he has read the letter; then, tell him to place the questionnaire in the inner envelope addressed to Rand after he has completed it. Tell him to seal the envelope and return it to you before he leaves Social Actions. Thank him for his cooperation.

2. After you have completed these instructions leave the room so that the individual can complete the questionnaire privately.

3. When the individual returns his completed questionnaire to you, thank him. Fill in the date next to his name on the list of no-shows, and mail the questionnaire immediately to The Rand Corporation, 1700 Main Street, Santa Monica, California 90406.

4. In a few cases, the individual may tell you that he does not want to participate in the survey. Tell him that the study is important and seek his cooperation. If he has not already read the letter accompanying the questionnaire, ask him to do so. However, if he still chooses not to participate after reading the letter, write refused on the questionnaire; then seal the questionnaire in the envelope addressed to Rand and mail it immediately. Fill in the date and write "refused" next to his name on the list of no-shows. This procedure formally removes him from our study and prevents his being recontacted.

5. When all individuals on the list of no-shows have appeared for the survey, send the list to \_\_\_\_\_ at Rand.

6. If you have any questions concerning the survey administration instructions please call Bruce Orvis, Dave Armor, Gail Burkholz, Jan Meshkoff, or Chris Williams at (213) 393-0411.

The survey packages left for individuals who had not appeared for the scheduled session(s) contained the followup questionnaire, a letter explaining the survey procedures, and a pre-paid inner envelope. Respondents were instructed to seal the questionnaire in the envelope after they had finished, and to leave it with Social Actions for direct mailing to Rand. The full text of the letter is reproduced on page 196.



Dear Survey Participant:

In 1977, the Air Force asked The Rand Corporation to conduct a study of various Social Actions programs. As a participant in this study, you completed a questionnaire given to you by Air Force personnel. You may remember that the cover sheet of the questionnaire indicated that you could be recontacted for a second survey at a later time.

We are now asking you to assist us again by completing this second and final questionnaire. We have asked Social Actions at your base to contact you because you were unavoidably absent when we made a visit to your base.

We want to emphasize that the survey is anonymous:

1. No name will be attached to any questionnaire.
2. No individual responses will be reported, rather we will analyze patterns of responses over all participants.
3. No questionnaire will be given to the Air Force or to anyone else outside Rand.

These procedures are being followed to enable you to answer the questionnaire completely and openly. This is very important, and we appreciate your cooperation.

It will take you about one hour to complete the questionnaire. When you have finished, please look over the survey to make sure you have answered all the questions. Then, seal the questionnaire in the envelope addressed to Rand and return it to the Social Actions representative. He will mail it directly to The Rand Corporation.

Now, please read the front page of the questionnaire carefully and begin working. Thank you, again, for your cooperation.

Sincerely,

At bases with very small numbers of study participants, the Social Actions administration procedure was used instead of Rand administration. The presurvey arrangements were very similar to those for visited bases. The chief of Social Actions was personally contacted by Rand. The arrangements were confirmed in a followup letter, which included the Social Actions administration instructions and the usual respondent and unit commander notification outlines. The content of the outlines was changed to a minor extent to accommodate individual and off-duty survey administrations (at the discretion of the Social Actions chief). If the study participant was scheduled during nonduty hours, his unit commander was not notified. The survey packages prepared for the study participants at these bases were virtually identical to those left for "no-shows" at the bases visited by Rand personnel. The words "you were unavoidably absent when we made a visit to your base" were replaced by "we were unable to schedule a visit for Rand staff to the base where you are stationed."

The followup questionnaire was sent directly to separated personnel by registered mail. To further protect the confidentiality of rehabilitation program participation for these persons, the usual survey package was sealed in an inner envelope and was accompanied by a general covering letter. The outer covering letter is reproduced on page 197.

In 1977, the Air Force asked The Rand Corporation to conduct a study of various Social Actions activities. As you may know, Rand is an independent agency that does research on many public policy issues. During the first stage of this study, you completed a questionnaire given to you by Air Force personnel, and you might remember that the cover sheet of the questionnaire stated that we might recontact you at a later time for a second survey. We are now asking you to assist us again by completing this second and final questionnaire.

Because we want the study to be representative, it is very important that we hear from everyone who took the first questionnaire, whether they are still on active duty or are separated from the Air Force.

We greatly appreciate your taking the time to complete the questionnaire, and we will pay you \$10 for doing so. The sealed envelope contains the questionnaire, a prepaid return envelope, and instructions. In order to meet our study deadlines, we would very much appreciate your completing the questionnaire within one week. Thank you very much.

Sincerely,

The covering letter accompanying the questionnaire in the sealed inner envelope is reproduced below.

Dear Survey Participant:

Because you participated in the first survey, we are very much interested in your recent experiences and attitudes. Even though you are no longer in the Air Force, your answers to the questionnaire are still an important part of the study.

Since some of the questions are of a personal nature, we have taken specific steps to enable you to answer the questions fully with complete assurance that your answers will remain confidential:

1. No name will be attached to any questionnaire.
2. Your questionnaire will not be studied individually, but will be combined with the other questionnaires and used only for statistical purposes.
3. No questionnaire will be given to the Air Force or to anyone else outside Rand.

Please work on the questionnaire alone and without interruption. It should take about one hour to complete. Please read the front page of the questionnaire as you begin working. When you have finished, look over the survey to make sure you have answered all the questions. Then, seal the questionnaire in the envelope provided and mail it directly to The Rand Corporation, 1700 Main Street, Santa Monica, California 90406.

We have enclosed a check for \$10 to pay you for your time, and we would greatly appreciate your completing the questionnaire within one week. Again, thank you for your cooperation.

Sincerely,

After a period of several weeks, a second survey package was mailed to separated personnel who had not returned the questionnaire. The package included a followup letter, again requesting the individual's cooperation.

## **Appendix E**

### **REHABILITATION SERVICES REPORTING FORMS**

The Treatment Disposition Form was completed by program personnel within two weeks of a client's entry into rehabilitation. It provided Rand with baseline information about the client's problems, means of identification, and treatment assignment. The form is shown on the following pages.

5 ☐ Don't know

## 5. What is the 1611 designation for this client's problem?

(check one)

- 46/ 1 ☐ Problem drinker (K1)  
 2 ☐ Alcoholic drinker (K2)  
 3 ☐ Client has not had a 1611 filed

## 6. What is the medical diagnosis for this client's problem?

(check one)

- 47/ 1 ☐ Episodic excessive drinking (303.0)  
 2 ☐ Habitual excessive drinking (303.1)  
 3 ☐ Alcohol addiction (303.2)  
 4 ☐ Other and unspecified alcoholism (303.9)  
 5 ☐ Diagnosed Problem Drinker as per A.F.R. 30-2  
 6 ☐ Isolated incident case, not Problem Drinker or Alcoholic  
 7 ☐ Client never referred for a medical diagnosis

## 7. Which of the following is this client's current treatment assignment?

(check all that apply)

Starting Date(s):  
(Month/Day/Year)

- |     |                             |                                                       |                |    |
|-----|-----------------------------|-------------------------------------------------------|----------------|----|
| 48/ | <input type="checkbox"/>    | Local rehabilitation (check A and/or B as necessary): | ____/____/____ | 2. |
| 49/ | A. <input type="checkbox"/> | Alcohol Awareness Seminars                            | ____/____/____ | 1. |
| 50/ | B. <input type="checkbox"/> | Active treatment                                      | ____/____/____ | 2. |
| 51/ | <input type="checkbox"/>    | Centralized rehabilitation (ATC)                      | ____/____/____ | 3. |
| 52/ |                             | Location: _____                                       |                |    |
| 54/ | <input type="checkbox"/>    | Follow-on support, active                             | ____/____/____ | 3. |
| 55/ | <input type="checkbox"/>    | Follow-on support, inactive                           | ____/____/____ | 4. |
| 56/ | <input type="checkbox"/>    | Other (Specify): _____                                | ____/____/____ | 4. |
| 57/ |                             | _____                                                 |                |    |

The Client Services Report provided detailed data about the rehabilitation services received by the client and about the client's status as he/she progressed through the program. Client Services Reports were completed by Social Actions rehabilitation staff at regular intervals (monthly while the client remained in Local Rehabilitation and quarterly after he/she entered Follow-on Support).

Two versions of the form were used because of the differences in the two programs. The Social Actions form is shown first; the rehabilitation center version immediately follows. At the time of the study, Alcohol "Rehabilitation" Centers were called Alcohol "Treatment" Centers, and "ATC" was used en lieu of "ARC."

### Social Actions

7-6 22

The Rand Corporation  
Air Force Alcohol Program Study  
1700 Main Street, Santa Monica, CA 90406  
SOCIAL ACTIONS CLIENT SERVICES REPORT

[illegible]

24

Today's Date: | | | |

10/

(Month/Day/Year)  
12/

(Please Print)

**Base:**

18/

(Print Your Name)

Form completed by:

1. Period covered by this form: (If this is the first Client Services Report for this case, the period should begin on the day the client entered the program.)

From:

(Net - 1997 Year)

To:

(Month/Day/Year)  
27/

2. Client's status in the program for each reporting period. (If more than one, fill in all that apply. Answer for first reporting period only.)

**Client's Current Stage:**

Dates Assigned to this Status

File this form monthly while client is in status A or B below.

FIVE

To

- 33/ A. ☐ Local Rehabilitation

- 34/ ☐ Alcohol Awareness Seminars

(Month/Day/Year)

(Month/Day/Year)

42

- 35/ ☐ Active Treatment

(Month/Day/Year)

(Month/Day/Year)

53

- 36/ B. ☐ Transferred to ATC for centralized rehabilitation

(Month/Day/Year)

(Month/Day/Year)

42

- 37/ Name of ATC:

File this form quarterly, after a Rehabilitation Committee meeting, when client has been assigned to status C or D below.

- 39/ C. ☐ Follow-on Support, Active

(Month/Day/Year)

(Month/Day/Year)

42

- 40/ D. ☐ Follow-on Support, Inactive

(Month/Day/Year)

(Month/Day/Year)

34

(#2 continues on next page)

*If client is in status E-G below, this will be the final form you will file.*

Date Assigned to this Status

43/ Specify type of unit and hospital \_\_\_\_\_

03

52/ Cause of death: \_\_\_\_\_

2 ☐ No



③

4. Direct services received by this client during this period. (If none, record "0")

Services Received	Number of Sessions Scheduled	Number of Sessions Attended	Hours per Session (Report in Fractions of hours)	Names of Counselors Therapists/Advisors
42/ <input type="checkbox"/> Alcohol Awareness Seminars				
43/ <input type="checkbox"/> Individual Counseling or Therapy (Enter hours separately for each counselor.)				
44/ <input type="checkbox"/> Group Counseling or therapy (Enter hours separately for each counseling team.)				
45/ <input type="checkbox"/> Behavior Modification (e.g., Aversive Conditioning sessions, etc.)				
46/ <input type="checkbox"/> AA Meetings (Use client's self-report, if necessary.)				
47/ <input type="checkbox"/> Marital Counseling/ Therapy (Accompanied by wife.)				
48/ <input type="checkbox"/> Family Counseling/ Therapy (Accompanied by dependents.)				
49/ <input type="checkbox"/> Occupational Therapy				
50/ <input type="checkbox"/> Recreational Therapy				
51/ <input type="checkbox"/> Other (Specify)				

03

5. Medications client is currently taking: (Check all that apply)

- 52/ 1 ☐ Antabuse 4 ☐ None  
 2 ☐ Tranquilizers 5 ☐ Don't know  
 3 ☐ Other (Specify) \_\_\_\_\_

6. Using all sources available to you, please give your best judgment on the client's progress in the following areas at the end of this reporting period (include Rehabilitation Committee evaluation if it occurred in the period).

A. Job performance: (Check one)

- 53/ 1 ☐ Excellent  
 2 ☐ Satisfactory  
 3 ☐ Unsatisfactory  
 4 ☐ Don't know  
 5 ☐ Client has been hospitalized

B. Relationships with friends and coworkers. (Check one)

- 54/ 1 ☐ Excellent  
 2 ☐ Satisfactory  
 3 ☐ Unsatisfactory  
 4 ☐ Don't know

C. Relationship with family (if married). (Check one)

- 55/ 1 ☐ Excellent  
 2 ☐ Satisfactory  
 3 ☐ Unsatisfactory  
 4 ☐ Client is unmarried  
 5 ☐ Don't know

D. Drinking behavior: (Check one)

- 56/ 1 ☐ Abstaining  
 2 ☐ Normal, controlled, or moderate drinking--no alcohol related problems  
 3 ☐ Problem/alcoholic drinking  
 4 ☐ Don't know

7. Comments. (Comment on client's progress, adjustment, and prognosis--include information on any additional alcohol-related incidents.)

8. What is the current recommendation for future treatment, if any?

Alcohol Treatment Center

7-8/01

The Rand Corporation  
Air Force Alcohol Program Study  
1700 Main Street, Santa Monica, CA 90406  
ATC CLIENT SERVICES REPORT

Case #:						3
---------	--	--	--	--	--	---

3

1/ 9/

9 /

Today's Date:     |     |     |

10/ (Month/Day/Year)

12/

**(Please Print)**

**Base:**

18/

(Print Your Name)

**Form Completed By:**

1. The period covered by this form should begin on the day client entered this program.

Date of admission to program: \_\_\_\_\_ 20/  
(Month/Day/Year)

Date of discharge from program: \_\_\_\_\_ 26/  
(Month/Day/Year)

2. Client's disposition: (check one)

- 32/ 1 ☐ Successfully completed program

- 2 ☐ Did not complete this program. Briefly explain reasons:

33/

- |   |                          |
|---|--------------------------|
| 3 | Deceased; cause of death |
|---|--------------------------|

37/

3. This client has been transferred: (check one)

- 39/ 1 ☐ To Social Actions at: \_\_\_\_\_ (Name of base) 40/

- 2 ☐ To Psychiatric Unit at: \_\_\_\_\_ (Name of base) 43

- 3 ☐ To Medical Unit at: \_\_\_\_\_ (Name of base) 46/

01

4. Direct services received by this client during this period. (If none, record "0")

Service Received	Number of Sessions Scheduled	Number of Sessions Attended	Hours per Session (Report in Fractions of Hours)	Name of Counselors/ Therapists/Advisors
<input type="checkbox"/> 49/ Individual Counseling or Therapy (Enter hours separately for each counselor.)				
<input type="checkbox"/> 50/ Group Counseling or Therapy (Enter hours separately for each counseling team.)				
<input type="checkbox"/> 51/ Behavior Modifica- tion/Aversive Conditioning				
<input type="checkbox"/> 52/ AA Meetings (Use client's self-report, if necessary.)				
<input type="checkbox"/> 53/ Marital Counseling/ Therapy (Accompanied by wife.)				
<input type="checkbox"/> 54/ Family Counseling/ Therapy (Accompanied by dependents.)				
<input type="checkbox"/> 55/ Occupational Therapy				
<input type="checkbox"/> 56/ Recreational Therapy				
<input type="checkbox"/> 57/ Other (Specify)				

5. Indicate below all medications client has taken during this period (include Antabuse, tranquilizers, etc.)

Name of Medication	Dosage	# of Days Taken	(C)
_____	58/ _____	66/ _____	12/
_____	60/ _____	69/ _____	14/
_____	62/ _____	72/ _____	16/
_____	64/ _____	75/ _____	18/

6. Using whatever information is available to you, please give your best judgment on the client's progress in each of the following areas at the end of this reporting period.

A. Relationship with family (if married). (Check one)

- 20/ 1 ☐ Excellent  
 2 ☐ Satisfactory  
 3 ☐ Unsatisfactory  
 4 ☐ Client is unmarried  
 5 ☐ Don't know

B. Drinking behavior. (Check one)

- 21/ 1 ☐ Abstaining  
 2 ☐ Normal, controlled or moderate drinking--no alcohol related problems.  
 3 ☐ Problem/alcoholic drinking  
 4 ☐ Don't know

7. Additional comments on client's progress, prognosis, etc.

\_\_\_\_\_  
 \_\_\_\_\_

8. What is the current recommendation for future treatment, if any?

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## Appendix F

### STATISTICAL ADJUSTMENT PROCEDURES

We noted earlier that the data presented in Chapter 3 reflect three adjustments of the survey results:

1. Data presented for the full survey sample were weighted to reflect the true proportions of inpatient and local rehabilitation program entrants and, at followup, the true proportions of active-duty and separated personnel.
2. Minor definitional adjustments in the problem measures were made to accommodate individuals who completed the followup questionnaire within one year of the admission survey.
3. The improvement rates calculated for the treatment modalities were adjusted to remove the effect of differences in admission characteristics among persons assigned to different modes of intervention.

The adjustments are described in more detail below.

As stated previously, ARC programs were deliberately oversampled to permit separate analysis of the clients receiving inpatient treatment. Therefore, results projected to the full population of rehabilitation program clients were weighted to reflect the true proportions of ARC and local program entrants. These proportions were .799 and .201 during the study period according to official records (i.e., AF Form 1611). The weights applied to the admission sample to yield these proportions while holding the total sample size constant were .451 for ARC entrants and 1.441 for local rehabilitation program entrants.

As noted in Chapter 2, the official records of participation in the alcohol rehabilitation program do not include all persons who attend the awareness seminar. The survey data suggest that if these individuals were included, local program entrants would constitute approximately 85 percent of all clients rather than 80 percent as indicated officially. This difference has little impact on our overall problem rates; the problem rate at admission would be reduced from 82.2 percent to 81.5 percent, and at followup, from 31.2 percent to 31.0 percent. We have, therefore, weighted the rates according to the official records data, which provide a more conservative estimate of the number of persons experiencing problems. Because they are more sensitive to this difference, however, the representativeness results (Table A.2) and the treatment assignment data (Table 3.5) were weighted by the revised estimate.

At followup, the weighting procedure involved an additional step to adjust for the fact that the response rate among active-duty personnel was higher than among separated personnel. The data were first analyzed to determine whether the separation rates were comparable for ARC and local rehabilitation clients. This was found to be the case, with approximately 35 percent of both groups separating during the study period. The respondents were then classified in the two-way table shown below, and the sample weights were determined as illustrated.

	Active Duty	Separated
Inpatient	$w_1 = .385$	$w_2 = .655$
Local Rehabilitation	$w_3 = 1.197$	$w_4 = 2.505$

$$w_i = (P_{I/L} P_{A/S} N) / n_i,$$

where  $w_i$  = weight for cell  $i$ ,

$P_{I/L}$  = true proportion of inpatient or local program entrants,

$P_{A/S}$  = true proportion of active-duty or separated personnel,

$N$  = total sample size,

$n_i$  = sample size for cell  $i$ .

Among the 756 respondents included in the followup analyses, 121 completed the questionnaire approximately six to seven months after the admission survey. A six-month time frame was used for these persons, instead of the standard one-year period used for the majority of respondents. Because the time period assessed for these individuals was half as long, the number of instances required to meet the criteria for multiple-instance problems was halved, as described below:

1. Alcohol dependence—24 symptoms required during the followup assessment period instead of 48.
2. Loss of working days—1.5 lost working days required instead of 3 days.
3. Hospitalization—1 day of hospitalization required instead of 2 days.
4. Visits to physician—1 doctor visit required instead of 2 visits.

The data indicate that the overall problem rates for the six-month and past-year subsamples are comparable after adjustment (34.9 percent and 30.5 percent, respectively).

We noted earlier that the clients assigned to intensive rehabilitation modes were more highly impaired at admission than those assigned to the less intensive modes. Since such persons are more likely to continue to experience problems after treatment than less-impaired individuals, these differences in impairment must be controlled when remission rates are compared for the different modalities. This was accomplished in two ways. First, the modalities were compared separately for alcohol dependent and nondependent clients. This procedure directly controlled for the most important discriminator of admission problem severity among clients receiving different treatments. Second, a multiple regression procedure was used to control statistically the effects of any smaller residual differences in admission status among clients receiving different treatments *within* the dependent and nondependent groups. The regression procedure is described below.

Numerous admission problem measures and background factors were initially correlated with the overall problem measure at followup. The results of these analyses were used to select significant predictors of followup status and to form empirically meaningful categories for the background variables. In the end, seven problem measures and ten background factors were chosen for the regression. These variables are described below.

## PROBLEM MEASURES

(covering the one-year period preceding admission)

1. Symptomatology—number of instances of the four dependence symptoms, up to a maximum of 365.
2. Intoxication—total instances of being drunk, sick, skipping meals, or being high for more than 24 consecutive hours because of drinking, to a maximum of 365.
3. Warnings—total instances of social warnings about the respondent's drinking, as assessed on the warning scale.
4. Days hospitalized—total days of hospitalization for alcohol-related reasons.
5. Missed workdays—total days lost from work because of missing entire days, arriving late or leaving early, or having impaired performance while on the job because of drinking.
6. Consumption—average daily ethanol consumption.
7. Total problems—total number of nondependent problems reported.

For the seven problem measures, the variables used in the regression analysis were equal to  $\ln(1 + x)$ .

## BACKGROUND VARIABLES

1. Marital/accompaniment status—not married or not accompanied by spouse versus married and accompanied.
2. Age—age at admission (20 years or less, 21 to 24 years, and 25 years or older).
3. Sex—male or female.
4. Education—did not graduate from high school versus graduated.
5. Social environment—number of current close friends who do not drink (none versus one or more).
6. Onset of heavy drinking—age at which the respondent began to drink heavily (20 years or less versus 21 years or older).
7. Abstinence difficulty—extent to which the respondent would find it difficult to stop drinking (difficult versus not difficult).
8. Physical health—number of health problems during past year, including hepatitis, ulcers, stomach pain, heart disease, numbness in extremities, vertigo, loss of balance, pancreatitis, anemia, trouble focusing eyes, weakness, fatty liver, and alcoholic liver disease (two or more problems versus at most one problem).
9. Race—white, black, or other.
10. Religion—Protestant fundamentalist, other Protestant, or non-Protestant.

In the analyses presented in Tables 3.7 through 3.11, a client's followup status was assumed to be a function of his initial problem type (dependent or nondependent), his mode of rehabilitation, and his assessed values on the 17 variables described above. Adjusting follow-up status for scores on the covariates involved computing multiple regression coefficients from the pooled within cell covariance matrix for all variables. This procedure was performed for each distinct analysis shown in Tables 3.7 through 3.11; the regression coefficients obtained for the 17 variables in each analysis are presented in Table F.1.

The coefficients were applied to the covariate scores of the clients within each cell of a given table to adjust the cell means for possible intercell differences on the covariates at admission. This involved a standard analysis of covariance procedure, which also removed the variance attributable to the covariates from the within-cell error term. Treatment mode



comparisons were based on the adjusted cell means, were made within the initial problem groups, were orthogonal, and used the adjusted within-cell error term.

Table F.1

REGRESSION COEFFICIENTS FOR TABLES 3.7 THROUGH 3.11<sup>a</sup>

Measure	Regression Coefficients				
	Tables 3.7-3.8	Table 3.9	Table 3.10	Table 3.11	
				Upper	Lower
<i>Problems</i>					
Symptomatology	.005	.014	.016	-.005	.041
Intoxication	.002	.004	-.005	-.009	.017
Warnings	.056	.032	.044	-.060	.002
Days hospitalized	.001	-.004	-.007	-.006	-.010
Missed workdays	-.011	-.021	-.015	.043	-.073
Consumption	-.012	-.007	-.007	-.027	.275
Total problems	.112	.096	.093	.023	.131
<i>Background</i>					
Accompaniment	-.064	-.037	-.048	.063	-.119
Age	-.094	-.102	-.092	.081	-.035
Sex	-.016	-.072	-.053	.052	-.051
Education	.057	.081	.110	-.054	.158
Environment	-.127	-.114	-.101	.022	-.132
Onset of drinking	.017	.051	.041	-.098	.016
Abstinence difficulty	-.028	-.038	-.049	.037	-.036
Health	.019	.038	.037	-.103	.100
Race	.023	.028	.032	.032	.031
Religion	.013	.001	-.005	.021	-.005

<sup>a</sup>The signs of the coefficients are based on assigning scores of 1 to persons with problems at followup versus 0 to persons without problems. For Table 3.11, a score of 1 was assigned to abstainers versus 0 to drinkers. The multiple regression generating the coefficients indicated for each table is significant at  $p < .007$ , at a minimum.

## Appendix G

### ESTIMATION OF PROPERTY DAMAGE

Of the 100 nondriving alcohol incidents sampled at four bases, there were 11 resulting in property damage. The 11 incidents and estimated replacement costs are listed below.

	<i>Incident</i>	<i>Replacement Cost</i>
1.	Damaged 5 feet of fence	\$ 300.00
2.	Destroyed coffee table, broken lamp and settee, carpet stained, missing receivers on three telephones	323.00
3.	Pool cue broken	20.00
4.	Crashed into fence; extensive damage	300.00
5.	Government vehicle damaged; bent frame, cracked windshields front and rear	1000.00
6.	Broken window	25.00
7.	Damaged chain-link fence; minor damage	250.00
8.	Barracks room severely damaged	600.00
9.	Broken window	25.00
10.	Bent street sign	50.00
11.	Nine yards of perimeter fence knocked down	400.00
	Total cost	\$3293.00
	Average cost	\$ 299.36

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